FEBRUARY 1946

FIREMEN

FIFTIETH ANNIVERSARY YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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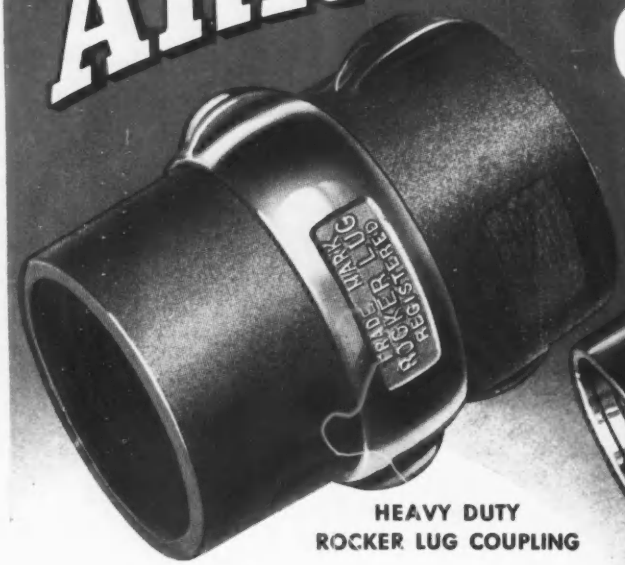
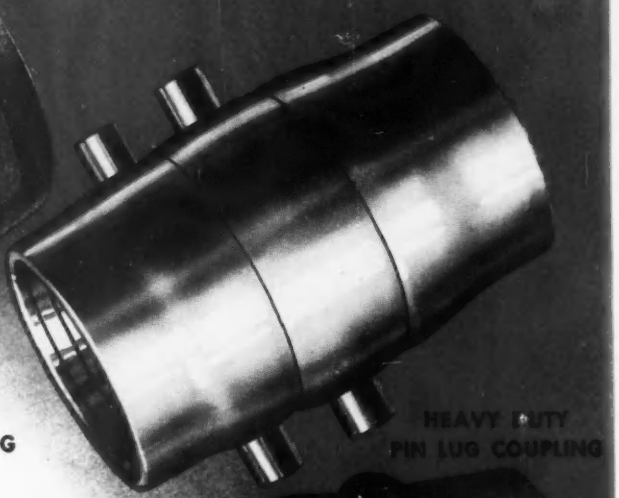
AKRON HOSE COUPLINGS



HEAVY DUTY
ROCKER LUG COUPLING



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Protect your department from substitutes. Be sure when buying hose to designate on your order — Couplings manufactured by

AKRON BRASS MFG. COMPANY, INC.
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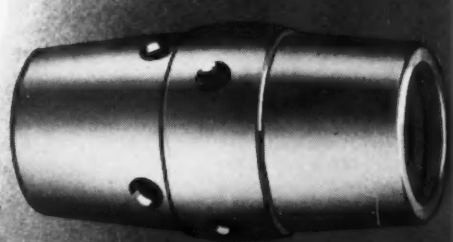

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PERFORMANCE COUNTS!

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Firemen

Volume 13 Number 2

WARREN Y. KIMBALL, EDITOR
ANNE BAILEY, ASSOCIATE EDITOR
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Published monthly for the fire service members of the

NATIONAL FIRE PROTECTION ASSOCIATION

60 BATTERYMARCH ST., BOSTON 10, MASS.
A VOLUNTARY NON-PROFIT ORGANIZATION

PERCY BUGBEE, GENERAL MANAGER
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THIS month's cover picture was taken at the height of the $175,000 fire that destroyed the Cleveland, Miss., high school.

School Fires, a record of 1,116 school fires between 1930 and 1945, is soon to be released by the National Fire Protection Associations' publications department. It is a well illustrated report that will be an invaluable addition to the library of fire officials.

A LOT of back country philosophy or "hoss-sense" has helped to provide safe and healthy living in thousands of homes. That is why all over America, for 154 years, farmers and other solid citizens with their feet on the ground have heeded the admonitions in the famous *Old Farmer's Almanac*. The Farmer's calendar for February 1946 contains this advice: "Be fearful of fires, for more farms are burned out this month than any other — and chiefly through carelessness or lack of foresight. Stop your fire before it starts. Avoid overheating your furnace and your stoves, keep screens in front of your open fires. Is your ceiling properly protected by asbestos near or around the furnace? Have you had all the chimney flues cleaned of soot? Is the masonry of your chimneys tight and well pointed up? Have you sand, pails of water, or, best of all, fire extinguishers ready, and do you know where they are? Are your payments up to date on your fire insurance?"

Such advice, if heeded, will surely go a long way to reduce the $90,000,000 annual farm fire loss toll in the United States. Some of the precautions might eliminate city fires, too.

THE National Fire Protection Association frequently has called attention to the fact that delayed alarms are one of the chief factors responsible for big fire losses. FIREMEN magazine has urged fire departments to stress the need for increased public fire alarm facilities in almost every community. There is no other phase of fire protection that has been as much neglected, both during depression and war years, as the installation and maintenance of adequate fire alarm systems.

During the present winter much of the United States has been faced by strikes, including several involving a large proportion of the telephone switchboard operators and maintenance workers of the country. The causes for these strikes are not the concern of fire officials. But such officials do have a right to be seriously concerned over the possibility of the interruption of telephone and other wire service essential to the transmission of fire calls from the public.

Many communities that otherwise consider themselves well protected against fire have for years been getting by without a modern fire alarm system under municipal control, placing full dependence on public telephone facilities. Such communities may be virtually without any means whatsoever of calling the fire department if phone workers walk off the job. The problem may not be as serious in communities having dial phones which continue to be available, but in suburban areas provided with the manual phone system, the situation comes close to being a threat to public safety. Many call and volunteer firemen depend upon telephone calls to alert them in the event of fire if they live where they cannot be sure of hearing the fire station siren.

The present dangerous situation may be used to promote reliable fire alarm service, if each fire department calls to the attention of local municipal officials the need of a real honest-to-goodness fire alarm system. Such systems for the average community are not expensive when they are compared with the sums spent on major fire apparatus that may be absolutely worthless unless each alarm is received promptly. Perhaps the fire company should appoint a committee to make a real study of the local fire alarm facilities with a view toward bringing them up to the standards for municipal fire alarm systems recommended by the National Fire Protection Association, as well as the requirements of the underwriter organizations having local jurisdiction.

THE December, 1945, fire loss in the United States totaled $49,478,000, according to figures reported by the National Board of Fire Underwriters. This figure is 7½ per cent higher than December, 1944, figures. Fire losses for the twelve months ending in December were $455,329,000, as compared with $423,538,000 for December, 1944.

Canadian fire losses during December, 1945, totaled $4,748,100, with a yearly estimate of $52,524,414.

PERFORMANCE COUNTS!

Fiftieth Annual Meeting of the N.F.P.A., Hotel Statler, Boston, June 3-7, 1946

International

19 Dead in Christmas Eve Hospital Fire

DEATH by fire and suffocation came to seventeen patients and two nurses at the Niles Street Convalescent Home in Hartford, Conn., last Christmas Eve. Such a fire tragedy could have happened in any city where building regulations did not state specifically that an enclosed stairway should be provided in an old building sheltering thirty-three elderly people and a number of nurses and attendants.

Less than a month before the tragedy occurred, an inspection had been made and found the house in excellent condition according to city standards. (*Hartford Courant*, December 25.)

Fire extinguishers were in working order and large placards over the two telephones gave explicit directions for reporting a fire.

History should not have to repeat itself in the cause of fire protection. Twenty-one years ago, a fire similar to the Niles Street Convalescent Home tragedy occurred at the Scobey Hospital in Boston.

On January 4, 1925, as the Christmas tree was being dismantled, a short circuit in the main light cord ignited the exceedingly dry tree and cotton snow. Flames flashed up the tree, spread through the rooms and into the hall.

The open staircase, recently varnished, served as a perfect flue and drew the fire upstairs. Somehow every patient but one on the top floor escaped with his life.

As the fire report concluded, "This fire is another example of the danger of vertical openings not properly constructed. A sprinkler system covering all portions of the building except the rooms occupied by the patients should be provided."

What Happened?

The hazardous element did not enter the home until after the inspection had been made. When the Christmas tree was brought into the house some ten days before the fire, one of the patients helped trim the tree. For some reason, it was necessary for him to repair the cord to the tree lights and form a substitute connection with wire from the coil of an electric clock. (*Hartford Courant*, December 27). Until Christmas Eve, this amateurish and dangerous repair job fulfilled its purpose.

On Christmas Eve at 9:02, an attendant on duty for the night extinguished the Christmas tree lights by pulling apart the plug and socket connection between the light cord and the extension. The break caused a spark which fell on the layers of cotton snow under the tree.

Instantly the tree blazed up, a pillar of fire spreading flame through the room. The attendant ran for a fire extinguisher, failing to close the door behind her. Incomplete inversion failed to start either of the two nearest fire extinguishers working, and she ran for outside help, leaving the front door open.

Within those few minutes of panic the fire swept up the un-enclosed stairway. The attendant on the second floor was unable to telephone an alarm of fire because the wires were almost immediately burned out.

Not until a neighbor heard the crackling of flames next door was an alarm turned in, although a box was located almost directly across the street. By that time the fire had reached the upper floors where thirty-three patients were sleeping.

History of the House

The Niles Street Convalescent Home was built some sixty-five years ago as a

duplex-type private residence. It was of ordinary construction, brick walled exterior, the interior of wood joist and plaster, with three stories.

A brick party wall dividing the two sections of the house was a prime factor in saving the house from complete destruction. Firemen were able to remove a few patients beyond the wall where fire could not reach them and thereby save a number of lives.

This brick wall, extending to the third floor ceiling, left a large open space under the flat metal-covered roof. There were no fire stops of any kind. On each floor a passageway broke a section of the wall.

Hartford Courant

On the Credit Side

Following the inspection earlier in the month by members of the city building supervisor's staff, housekeeping and maintenance were found to be excellent. No fire escapes were required, but the necessary separate front and rear stairways were provided. Soda-acid extinguishers and water pump cans were conveniently placed about the house and all were in working order.

A fire alarm box was located about seventy-five feet from the front door. There were hydrants in the neighborhood with an ample supply of water.

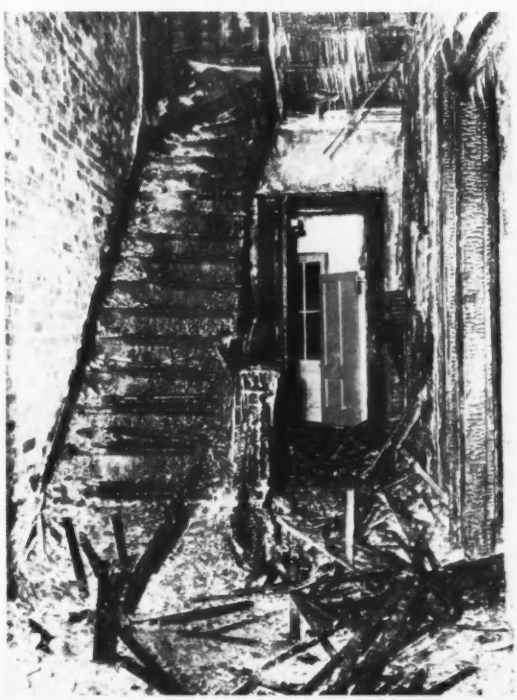
On the Debit Side

But seventeen aged and bed-ridden patients and two attendants died by fire in this apparently safe and secure residence. The deadly combination of an already raging fire and the open doors providing an excellent draft swept the fire up the old wooden stairway to consume all life and property in its path.

The fault might be said to lie at the source when the house was first remodeled into a hospital, or when it was later converted to shelter elderly and bedridden people. It might have been foreseen that in the event an emergency evacuation was necessary, an enclosed stairway would be a life-or-death factor. The un-enclosed, old fashioned staircase in the unsprinklered Niles Street Convalescent Home could hardly have been considered a safe, adequate, and convenient means of exit in any interpretation.

According to the Connecticut State Law for Exits:

"Each story above the first story of a building used as a . . . boarding or lodging house accommodating more than twelve persons . . . or of a building used in any way not named but which has a similar need of such protection shall be provided with more than one way of egress, by stairways, on the inside. . . . Such stairways . . . shall be so constructed in such number, of such size and in such location as to give, in the opinion of the officer charged with the enforcement of this section, *safe, adequate, and convenient means of exit*, in view of the number of persons who may need to use such stairways."



Above. "No fire escapes were required, but the necessary separate front and rear exits were provided."

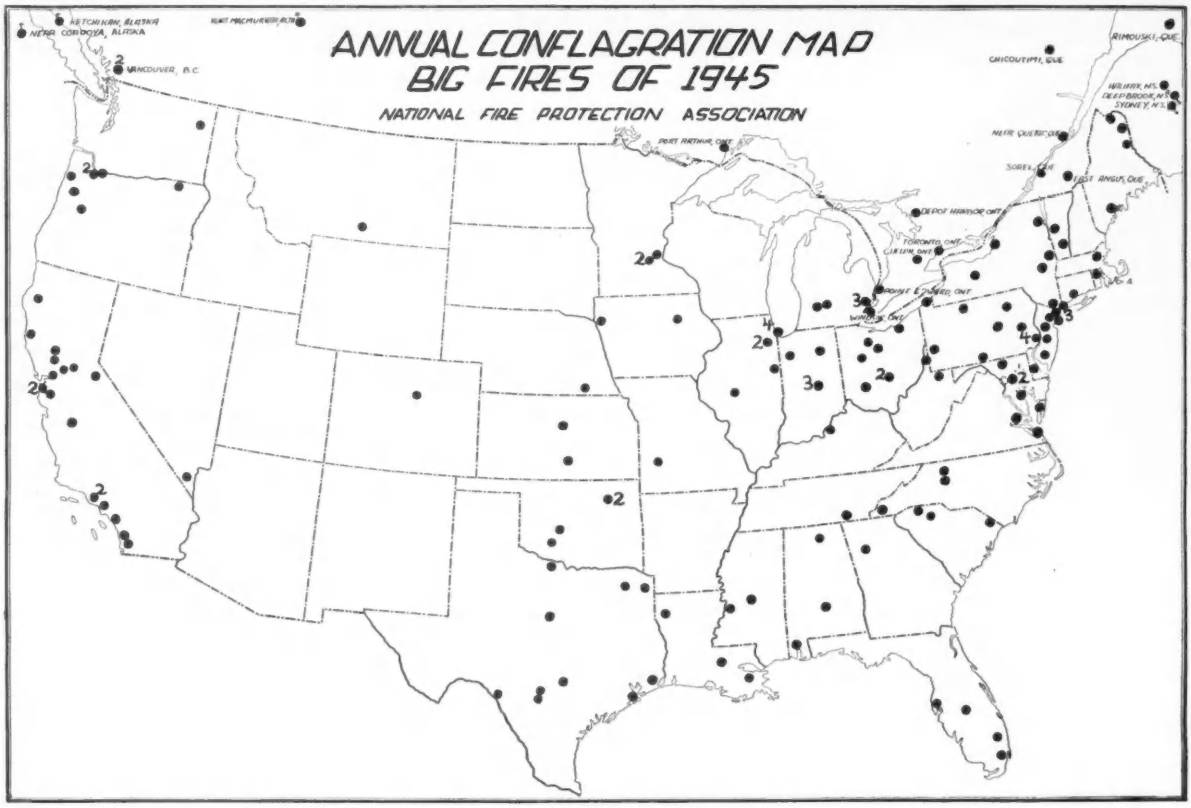
Left. "The deadly combination of an already raging fire and the open doors providing an excellent draft swept the fire up the old wooden stairway."

Concluding

The highly flammable cotton snow and the faulty wiring job, had they been installed when the building inspectors visited Niles Street, would certainly have been banned from the convalescent home. Such hazards should be eliminated from any occupancy. It is as simple to obtain flame proofed decorations as it is the life-hazard kind.

But do such tragedies have to occur before laws are laid down to enclose hospital stairways? Why is it that city codes specify safe construction for new

Continued on page 26



1945's Big Fires

LARGE loss fires, individually causing $250,000 or more damage, hit a new, all-time high of 163 in 1945. Total dollar damage from this group alone approximated 25 per cent of the estimated national fire loss of $455,000,000.

Nineteen hundred forty-five's record tops last year's total of 122 large losses, is half again as big as 1943's and twice that of 1942.

Analyzing the tabulations, the results reflect:

a. That six aircraft hangar fires did damages estimated at $36,375,000; a clear indication of high value contents in one unbroken fire area requiring improved degrees of automatic protection.

b. That warehouses are the most susceptible occupancy to large losses, 37 separate cases being included in the 163 total. Average loss per fire approximated $617,000. Contributing factors to the extent of these fires were absence of sprinklers or alarm service, lack of watchman, congested storage, and inferior construction.

c. Large losses totalling $10,835,000 were experienced by metalworking industries. Individually expensive, and sometimes critical, machine tools accounted for the high dollar damage in 17 specific fires. Welding and careless smoking were chief causes plus storage of such highly flammable substances as paraffin coated paper protective materials and finished aircraft ailerons without proper fire cutoffs.

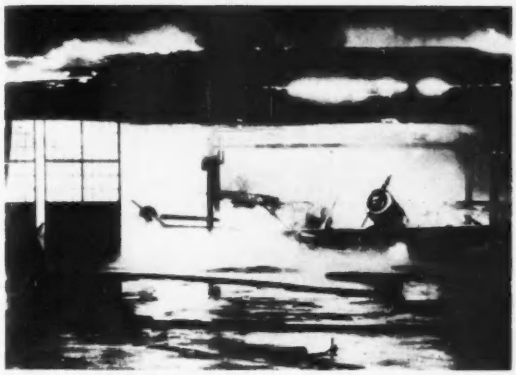
d. Multiple Occupancies, normally involving one or more mercantile stores, offices, apartments, theaters, or even warehouses, experienced 26 fires causing damages of $250,000 or more. Outstanding feature of these fires was that 20 were of unknown cause, the result of delayed discovery during periods when business was not being conducted.

e. Large losses must be expected in Pier and Shipyard fires; in 1945 four cases cost nearly $8,000,000. Lack of protection in underpier areas, difficulty in reaching the source of fire, and combustible pier superstructures increased the losses in almost every case.

f. Food Processing Plants suffered 9 fires in the large loss category during 1945 doing damage estimated at $4,800,000. A remarkable number of these plants were outside city limits or lacked adequate public protection. Outstanding example was the four-acre citrus juice plant fire in Dunedin, Florida. (See October 1945 *Quarterly*, pp. 113–114.)

g. Sawmills, Lumber Yards and Wood-working plants had approximately the same number of large losses as in 1944. Quick burning stocks, large areas subject to one fire, and definitely substandard private and public protection featured in six of these fires. Two occurred in sprinklered plants, one during high winds which swept flames out of control and the second which opened over 850 heads without sufficient water supplies to meet demand.

Other large loss fires (53) touched fourteen different categories of occupancies plus such special incidents as the aircraft crash into the Empire State Building (see *Volunteer Firemen*,



Press Association, Inc.

Left — This Wichita Municipal Airport hangar was destroyed by fire caused by short circuit in battery cables of a fabric-covered cub. Twenty-eight planes, with overlapping wings were destroyed. Automatic sprinklers had been considered, but insufficient city funds prohibited installation. Loss: $495,000.

September 1945, p. 5 on), the Halifax, Nova Scotia, Munitions Explosion and two general conflagrations (at Mahoney City, Pennsylvania [see August 1945 *Volunteer Firemen*, p. 18] and Los Angeles County, California).

Causal factors in these fires present equally interesting statistics from which some conclusions may be drawn:

a. Out of 140 cases, we find that in 65 cases the plant was in operation at the time of the fire. This fact effectively stymies the oft-heard theory that large fires do not occur when personnel are on the job. In the metal-worker class, 14 of the fires occurred while the plants were operating and only 2 during shut-downs. Sawmills had a 6 to 3 ratio. In the 75 instances where the plant was not in operation, the multiple occupancy class was the heaviest sufferer followed by warehouses and food processing plants. The absence of the human element, therefore, is likewise no guarantee against large losses and the only suitable guardian again appears to be automatic fire protection.

b. The larger the loss, the less likely it is that the cause will be known. It is therefore not absence of research, but rather the destruction of evidence which accounts for 79 out of 163 fires being charged to "unknown." Certain suspicions are well founded in many cases, such as careless disposal of cigarettes, spontaneous ignition, defective heating, and electrical short circuits, but in cases where the cause could not be positively identified it has been listed as "unknown."

c. Electrical defects heads the list of known causes accounting for 14 large loss fires. Food processing plants had 3 such cases, warehouse, mercantile groups, and rubber manufacturing plants two each. Electrical maintenance is paramount in this connection,

Above — Automatic sprinklers were shut off in 1931 and fire swept this Multiple Occupancy Warehouse in Woonsocket, R. I., May 27. Open fire doors, unprotected vertical openings allowed fire to spread through four connecting structures. Cause believed to have been spontaneous ignition of wastes. Loss $300,000.

plus elimination of unused live circuits, clearance from stocks, and provision for explosion-proof equipment in hazardous areas.

d. Welding and/or cutting operations were second on the causal list. Eleven large loss fires resulted from careless use or lack of satisfactory fire guards. From using a welding torch while flammable liquids were being dispensed in the vicinity to the mysterious ignition of under-floor areas, the need for precautions is well illustrated. And if the precaution is a human fire guard, he must be thoroughly conscious of the extreme importance of the assignment without allowing even temporary diversion.

e. Careless smoking and matches started four destructive fires in metal working plants, two in warehouses, and one each in the forest fire and steamship classifications. Labor must be impressed with the necessity for the NO SMOKING rules if lives of workers are to be spared, their employment secured.

f. Continuous preventive maintenance of all flammable liquid and gas pipe lines is spelt out forcefully in five other large loss fires of 1945. Three Food Processing and two Rubber Manufacturing plants were destroyed as these pipe lines failed, largely during inoperative periods.

Lesser causal factors include spontaneous ignition (4), rubbish handling (4), lightning (3), arson (3), and a whole host of special causes peculiar to the individual operations which seem to prove again that fire prevention engineering is an all-inclusive, full-time occupation.

Delmer L. Curtis, Tulsa

Above — One of Tulsa, Okla.'s two $500,000 fires on Dec. 19th destroyed the down-town Renberg Department Store. Discovered by a passer-by at 6:51 A.M., it typifies other mercantile fires where lack of automatic protection or watchman service permits a night fire to spread undetected.

Right — Laxity in maintenance of automatic sprinkler systems contributed to $975,000 loss of the E. C. Stearns & Co. 75-year-old factory formerly making hardware. Four suburban fire departments aided the Syracuse, N. Y., City Department in preventing spread of flames.

Fire Department Instructors in Annual Meeting at Memphis

Photos of Memphis Conference courtesy of Joseph A. Boerzig, Cleveland Fire Department, Charles E.Torian, Memphis Fire Department and Schaedle Studio

The leaders of the Memphis Fire Department Instructors Conference hear William S. Smith, Safety Director, Ford Motor Company, Dearborn, Mich., discuss "Welding Hazards." Seated, Chief Connie O'Sullivan, Memphis Fire Department, Richard E. Vernor, Manager, Fire Prevention Department, Western Actuarial Bureau, Chicago, Chairman of the Conference, and N.F.P.A. President.

Joseph I. Fetters, Supervisor in charge of firemen's training for the State Department of Vocational Education, Nebraska, telling "How to Improvise Equipment for Training Schools."

The annual broadcast summary of the conference by Prof. H. R. Brayton, Texas A.&M. College. Seated, R. J. Douglas, Beech Aircraft Corporation, Wichita, Kans.

ATTENDANCE at the 18th Annual Fire Department Instructors' Conference last month reached 544, with persons engaged in firemen's training present from thirty-five states, the District of Columbia and Canada. Deputy Chief Sven Sonnenberg of the fire department of Malmo, Sweden, also took advantage of a visit to this country to attend.

This attendance registers the popularity of this unique meeting. It is what its name implies — a conference. It is not a convention, nor is it a training school. The conference is sponsored jointly by the Fire Prevention Department of the Western Actuarial Bureau of Chicago, of which department R. E. Vernor is manager, and the Memphis Fire Department, Connie O'Sullivan, Chief.

This is the twelfth year in which the conference has been held in the fire headquarters building at Memphis. Supporting Chief O'Sullivan as hosts to the conference were Walter Chandler, Mayor, and Joseph P. Boyle, Vice-Mayor and Commissioner of Public Safety of Memphis; James B. McCormack, Commissioner of Insurance and Banking of the state of Tennessee, the Memphis Chamber of Commerce, and the Tennessee Inspection Bureau.

The forty-five program items in the four-day meeting, January 8–11, were contributed to by persons prominent in the fire field nationally, by state fire marshals, by leaders in firemen's training in more than a dozen states, in municipal fire departments, in insurance inspection departments and in industry.

The meeting was presided over by R. E. Vernor as Chairman. Mr. Vernor is also President of the National Fire Protection Association. Harry K. Rogers, chief instructor of the Fire Prevention Department, Western Actuarial Bureau, as Vice-Chairman handled numerous program items, and Emmett T. Cox, also of the Fire Prevention Department, acted as Secretary of the conference, assisted by Robert F. Hamm, Director of Fireman Training, Indiana Inspection Bureau.

Speakers from the national field included Fred Shepperd, Editorial Director of *Fire Engineering*, Horatio Bond, Chief Engineer, National Fire Protection Association; W. A. Ross, Consultant, Public Service Occupations, U. S. Office of Education, and Curtis R. Welborn, Secretary, Underwriters Laboratories, Inc.

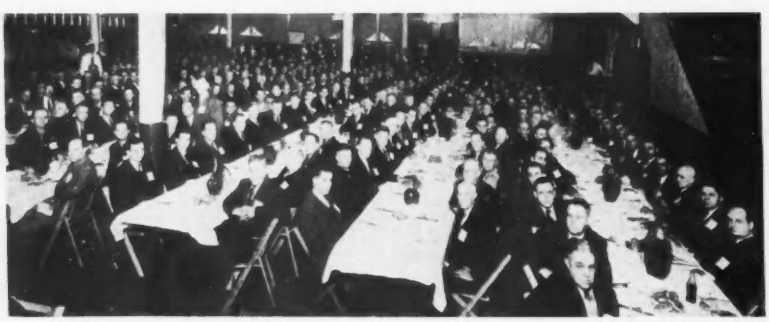
State fire marshals on the program were: John H. Craig, Illinois; E. A. Taylor, Deputy, Oregon; L. C. Anderson, Fire Prevention Engineer, Ontario. Men on the program engaged in firemen's training work in their respective states were: Ben E. Harris, Alabama; Thomas S. Ward, California; R. C. Byrus, Iowa; Chief J. W. Just, Maryland; C. H. Whittaker, Mississippi; Joseph I. Fetters, Nebraska; H. S. Elkins, Tennessee; Prof. H. R. Brayton and R. O. Muenster, Texas.

Municipal fire department officials on the program were: Lt. Harry H. Wolff, Chicago; Battalion Chief Frank McNea, Cleveland; Chief Frank Egenriether, St. Louis; Director Francis B. Wornall, Kansas City, Mo.; Chief J. H. Krusenklaus, Louisville; Capt. G. F. Vernotzy, Akron; District Chief F. B. Lucas, Dayton; Capt. J. W. Davis, Miami; Chief Sidney J. Ulrich, Peoria; Chief Roy W. Alsip, Champaign, Ill.; Chief Ray T. Hall, Benton Harbor, Mich.; Chief Osborne E. Hirst, Galena, Ill.

Program items were also presented by Calvin G. Lauber and George Tatnall, engineers, National Board of Fire Underwriters; J. T. W. Babcock, Assistant Chief Engineer, Factory Insurance Association; Elmer F. Reske, Manager, Cook County Inspection Bureau, Ill.; William A. Hamilton, Manager, Chicago Board of Underwriters; R. C. Loughead, Chief Engineer, Michigan Inspection Bureau; M. I. Parker and W. B. Larkin, engineers, Missouri Inspection Bureau; L. B. Gregg, engineer, Oklahoma Inspection Bureau; Harry J. Corcoran, engineer, Iowa Insurance Service Bureau.

Industrial fire protection problems were presented by William S. Smith, Safety Director, Ford Motor Company, Dearborn, Mich.; Capt. James J. Smidl, Patterson Field, Ohio; Chief Robert Hanigan, Air Base, Pierre, S. D.; H. C. Kraemer, Maintenance Superintendent, Servel, Inc., Evansville, Ind.

Two views of the Fire Department Instructors' Conference in session. **Left** a luncheon meeting with tables set up on the main apparatus floor of the headquarters fire station at Memphis. **Right** a regular session in the headquarters meeting room.



Plant Protection During Strikes*

by Capt. Gerald F. Vernotzy
Akron, Ohio, Fire Department

STRIKES are no excuse for fires.

When a strike grips a plant, fire danger runs high.

So does excitement. There is more danger of fire during a strike. There is more excitement.

But the ground work should have been laid for the plant's protection long before the strike happened. Everybody should have been ready. All precautions should have been taken.

Every one is talking about strikes. This subject may be considered by some to be controversial. Nevertheless, it presents a particular situation which must be given serious consideration by all men engaged in fire education or fire administrative work.

Plant protection during strikes is a timely topic. It's one which is unwisely ducked by too many people — including firemen. I have enough faith in my profession — and my fellow-workers — to believe they will see it as a problem which must be handled in an intelligent manner.

Most top officials of large industrial concerns do not realize the additional responsibilities placed on the shoulders of their fire chiefs during a strike. They are concerned mostly with the negotiations that may or may not be in progress, in an effort to settle the differences between the workers and management and thus resume production.

Fire protection of a strikebound plant must not lean on the outcome of negotiations between management and labor.

A strike situation puts a fire chief on the spot. The mayor or safety director, or whoever the chief's immediate superior may be, is interested in maintaining law and order on the city streets. On the other hand, the fire chief's big headache is conditions inside the plant. One important thing is a pre-strike agreement between the municipal fire chief and the plant chief for the exchange of information that will be of great value in case of fire during the strike.

In speaking of agreements, I have yet to read a contract between labor and management in which any agreement has been entered into regarding the protection of a plant against fire during a strike. It seems rather odd that the labor unions themselves have not insisted on some agreement that would insure adequate fire protection for the plant in which they work. What possibly could be gained if, say a wage point, was won as a result of strike action, only to find that the plant had burned down in the meantime?

I know of only a few cases where management and its own fire chief have come to any definite agreement as to who shall negotiate for the necessary personnel to handle emergencies within the plant, where fire protection devices are involved.

In respect to conditions existing during strike action, the functions of the fire departments — both municipal and industrial — depend on several factors.

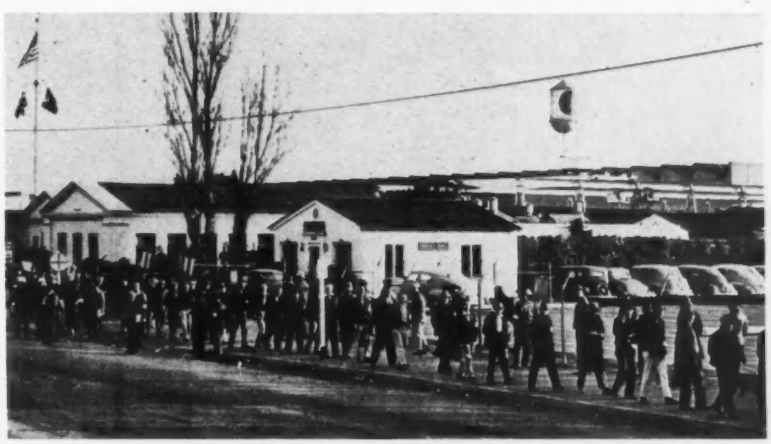
The first factor is the type of strike. Is the strike of a passive nature where some departments are working, or is it a so-called wild-cat strike which has not been recognized by the union as a whole, or is it a total strike resulting in a picket line being established around the entire plant? Is anyone being permitted to enter the plant, such as firemen, plant guards, maintenance crews, and the like? Are these crews of sufficient number to maintain a safe condition within the plant, so far as fire prevention is concerned?

If a total strike — one in which a picket line has been established around the plant — it is obvious that first precautions are to shut down hazardous processes carefully and to leave the plant clean. Removal of lint, dirt, and rubbish; draining and cleaning of dip and mixing tanks, and other equipment where flammables have been used; closing of gas valves; opening of switches on power circuits which will be out of service; and setting of anchorage on yard cranes; — all these are examples of items which need attention.

Frequently, there will be sufficient advance notice so that a proper shut-down can be easily accomplished. In other

Continued on page 18

When fire breaks out in the strike-bound plant what provisions have been made to save the property from destruction? *Acme*



**Digest of a paper presented, January 8, at the Fire Department Instructors' Conference, Memphis, Tenn.*

Fireman, Play Safe and Survive!

By R. F. Petrasek, Plant Engineer
Carrier Corporation, Syracuse, N. Y.

IT is not necessary to elaborate on the perils of the fireman's job. Perhaps it is the most thankless of all jobs involving, as it does, the personal risk and sometimes the supreme sacrifice that others may live and property be saved.

Still, members of the fire service stand on lecture platforms and preach the doctrine of being cool, calm, and collected; walk, do not run, to the nearest exit; they advise ways to conserve strength and energy when trapped, and pass along many other safety instructions. Then in moments of emergency the fireman forgets these precautionary measures and takes the risks that uphold the glorious tradition of fire fighting.

The fireman killed in line of duty is acclaimed by the public and then the public soon forgets the dead hero. Think of the crippled firemen that fire departments have on their rosters. Think also of the firemen who are killed or maimed responding to false alarms. For some unknown reason, a greater percentage of firemen are injured answering these false alarms than going to actual fires. In the case of a volunteer who has taken up fire fighting as a hobby or as a civic obligation, his death or injury seems entirely unjustified.

The reader must be ready by now to cite cases within his own department proving that firemen do practice personal safety and are taught how to act in smoke-filled areas, how to carry an axe, the importance of wearing protective clothing, the safe use of equipment, safe handling of hose lines, correct placing of ladders.

On the subject of ladders, a manual prepared by the Department of Trade and Industrial Education, Oklahoma A & M College, a very complete and excellent text book, reviews the correct practices. Going through the index, there appear such headings as Ladder Design, Materials, Trade Terms, Kinds of Ladders, etc., and finally, Precautions in Handling Ladders.

"Before studying the carrying and raising of ladders, a note of precaution should be sounded so that firemen will be conscious of the fact that they are handling equipment that, even though designed for emergency use, must be treated with respect and must be given the best of care. The existing emergency incurred by a fire may already threaten the lives of one or more citizens, and no greater hazard should be created by the careless handling of the chief rescue equipment — namely, the ladders."

The chapter goes on to state that the ladder should be in first class condition and cautions against maintenance neglect. It states, "Let us compare the handling of a ladder to the handling of a human body. If you were unable to move about and had to be carried, would you prefer a group of untrained men . . . ," concluding that "There is a need of a rhythmic cooperative procedure of a well trained group of ladder men."

The chapter ends with the statement, "Good ladder practices not only save equipment and make for efficiency, but naturally afford a greater degree of safety to the man using the equipment; and that, after all, is the factor of greatest importance."

All of this is very true, but it is not all that the fireman has to worry about.

In ladder carries, the one-, two-, four-, and six-man, it is learned that some men climb correctly while others have to be taught, stressing the rhythm, using the balls of the feet, and the proper use of the leg lock.

In placing ladders, it is found tha there are two methods used to determine the correctness. The heel of the ladder should be placed out from the building, a very worthwhile safety feature, and the windows should never be blocked.

In considering one-, two-, three-, and four-man raises, the entire evolutions are worked out so that every man knows exactly what to do. Ladder practice lessons are wound up with raising extensions, Bangor, pompier ladders, special uses, and roof hitches.

It must be acknowledged that in ladder practices, safety precautions are worked out to the *nth* degree. There still remains, however, one very important safety rule. This is to be found in the N.F.P.A. *Training Manual for Auxiliary Firemen*, published in 1942.

"Each man assumes a squat position and with the hand nearest the ladder, he takes hold of the rung or beam. The men then raise the ladder by *using the strong thigh muscles.*"

Like Archimedes shouting Eureka! this is the missing link in the program of playing safe to save. It has been

About the Author—

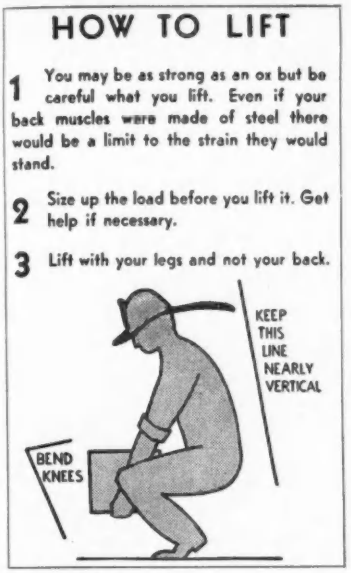
MR. PETRASEK'S fire engineering activities date back to that fatal March 25, 1911, when, as he wrote, "I was walking through the downtown section of New York when someone pulled a fire alarm box, and I found myself in a ringside seat at the most tragic scene of my life. During the excitement of watching the apparatus connect and the ladders rise, something whizzed by and landed at my feet. It had the appearance of a bundle of rags but actually it was a human body that had plummeted from the tenth floor . . . it wasn't long before there were many other bundles heaped on the sidewalk."

The reference is to the tragic Triangle Waist Co. fire in which 145 lives were lost because a .79 lock had been installed on a so-called exit door.

The horror and tragedy of this fire left a vivid impression. Mr. Petrasek became keenly interested in the ways and means of fire prevention. As a member of the Mount Vernon, N. Y., Fire Department, he served as captain of engine company No. 3.

Taking up engineering, Mr. Petrasek did considerable work as an industrial and fire department consultant and was appointed, by the Syracuse Board of Education, chairman of the Advisory Board for Defense and War Training and, for the New York State Department, Supervisor of Time Study and Work Simplification in 1940.

As a dollar-a-year man, Mr. Petrasek was a special agent and consultant on safety and fire protection for the Department of Labor. Next came work on the New York State War Council as Chief Instructor for the Fire Training of Industrial Fire Brigades for the Syracuse-Onondaga War Council. At present Mr. Petrasek is plant engineer of the Carrier Corporation in Syracuse, N. Y., one of the largest manufacturers of air conditioning equipment and a member of the N.F.P.A.


HOW TO LIFT
1 You may be as strong as an ox but be careful what you lift. Even if your back muscles were made of steel there would be a limit to the strain they would stand.
2 Size up the load before you lift it. Get help if necessary.
3 Lift with your legs and not your back.
KEEP THIS LINE NEARLY VERTICAL
BEND KNEES

National Safety Council

proven that one of the serious sources of injuries to firemen — both professional and volunteer — is improper lifting. Sprains, strains, and hernias are incurred in manual lifting and carrying heavy objects such as ladders and charged hose lines. Pathetically enough, all these injuries can be prevented without slowing up the tempo of the firemen's job.

Some of the causes of weight-lifting injuries as they relate to the fireman's duties can be analyzed. First on the list is lifting the wrong way, resulting in undue strain on certain muscles and ligaments, especially in the back and groin.

Second, we find lifting by firemen not physically capable of doing the job — particularly the volunteer firemen who must respond to alarms under entirely different physical conditions. Also, we must recognize the fact that very few volunteer organizations screen out those who are below the acceptable physical standards, as established by professional fire departments.

Note: Intestinal fortitude is not evaluated by any physical standard! We take it for granted — particularly in volunteer firemen.

The third cause is blamed on team lifting, lifting by two or more firemen at which time the uncoordinated efforts of untrained firemen result in too heavy a burden upon one or more.

Fourth, misplaced zeal accounts for many accidents when, in the excitement of fighting a fire or saving lives, a fireman may become so emotionally pitched that he attempts to do Herculean tasks far beyond his physical capacity.

Unsure footing is a fifth cause of accidents among firemen.

Those are the causes; what are the cures?

Proper training in weight lifting and proper and continued supervision by the officers to make certain that the normal lifting instructions are followed. As to training, the following simple rules should be carried out:

1. In "solo" lifting (*a*) Face the object, ladder, hose, equipment, etc., with feet far enough apart (the length of a shoe is a good guide) to give the base of operation without placing undue strain on the abdominal muscles. Adopt a stance which is comfortable and which will permit the lifting of an object as nearly straight up as possible.

   (*b*) Get down to the object by bending the knees, keeping the back straight.

   (*c*) Raise the weight gradually, sudden effort invites strain, by straightening the legs, taking the brunt of the strain upon leg and shoulder muscles.

2. In "team" lifting, the efforts of the various workers must be completely coordinated with directions

Continued on page 26

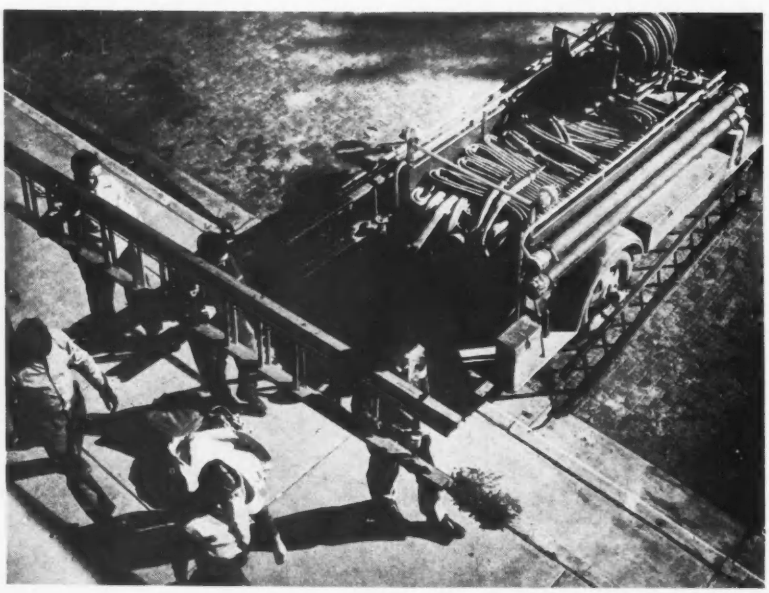
Safety Tips by Art Espey. Former head of the Pennsylvania Fire School and now with the Cardox Corporation in Philadelphia.

HAND RAILS ARE JUST ORNAMENTS. IGNORE 'EM! NEVER WEAR A HELMET GOING TO OR COMING BACK FROM FIRES. YOU NEVER LAND ON YOUR HEAD, ANYWAY!
AN EXTINGUISHER'S AN EXTINGUISHER, AIN'T IT?
SO, GRAB THE WRONG ONE, AND LET 'ER SPLASH! FIRE FIGHTING HAS TO BE A SPECTACULAR JOB EVEN IF YOU HAVE TO PROVIDE THE EFFECTS.
NEVER LOOK BEHIND YOU BEFORE YOU SWING THAT AXE! ANY MONKEY OUGHT TO KNOW ENOUGH TO TELL YOU HE'S THERE!
GOLLY!
NEVER MIND THE APPROVED KNOTS! YOURS ARE SIMPLER AND QUICKER.
BESIDES, YOU NEVER DID CARE A HELLUVA LOT FOR THAT SAP TRAFFIC COP, ANYWAY!
THANK HEAVEN! MOST OF OUR SMOKE-EATERS KNOW BETTER.
HUG THE LADDER. ALLOW PLENTY OF OVERHANG FOR BALANCE. CARRY THE PIPE IN FRONT. THEN, IF THE LINE IS CHARGED, AN' YOUR FEET OR HANDS SLIP—
ALWAYS GANG UP IN THE DOORWAY. THE GUY "ON THE PIPE" IS A SUPERMAN. "HE DON'T NEED NO AIR!"
TAKES A EXPERT, YA SEE?
YOU CAN ALWAYS HANG ON BY YOUR CHIN!
DON'T EVER TEACH A ROOKIE THE EASY WAY. MAKE SURE, TOO, THAT HE'LL RECOGNIZE YOUR SUPERIORITY.

Red Cloud Junior Fire Fighters

"ANGELS with Dirty Faces" is what one newspaper called them; but to the citizens of Red Cloud, Nebr., they are a group of fifteen-year-olds who constitute an auxiliary fire department. The Red Cloud Junior Auxiliary Fire Department members are learning thoroughly the job of fire fighting, and at the same time they are contributing valuable service to their community.

The group — an outgrowth of the civilian defense program — was organized in 1942. About fifteen enthusiasts made up that first fire department. Since then Uncle Sam has put uniforms on thirteen of the original crew members and eighteen junior firemen who joined later. At the present time twelve boys are carrying on the work, and only two of the charter members remain.



Officers of the group are a junior chief, assistant chief, and secretary-treasurer. The boys, most of whom are still in high school, meet on the first Tuesday of each month to discuss their work, to study problems, and to conduct business. They spend hours each week perfecting their technique in ladder work, first aid, ventilation, and rescue work.

Ladder work, they know, is a matter of teamwork; and junior firemen have learned to act in squads and to carry and erect ladders with clock-like precision. They learn correct footing and balance on ladders. They are taught to handle hose lines, to rescue persons from windows, to use ladders as stretchers for victims in need of first aid.

An oldtimer in the regular fire department, who is captain of the first aid squad, has taken over the training of the junior firemen. In addition, all the regular firemen contribute their time and knowledge in giving pointers to the youths.

Although the junior firemen are real firemen, they cannot enter burning

buildings. There are other risks, too, which they must not face. Not until the boys are 21 can they graduate to the senior fire department. But more than once they have proved themselves valu-

able in the work they have been trained to do.

Red Cloud isn't a very big place. Its population is approximately 1,600. No building is higher than two stories. The fire department equipment includes two 500-gallon pumpers; fog nozzles; 600 feet of 1½-inch hose, 1,400 feet of 2½-inch pipe line, and a reserve of more than a thousand feet of new hose. They have also a well-equipped squad or rescue car. The fire department with the aid of the juniors keeps things under control.

But there was one time when the outlook was bad. The whole town might possibly have gone up in flame had it not been for the junior firemen, according to reports from Red Cloud.

At 3 A.M. one day in October 1943, fire started in the yards of a lumber company. A brisk wind blew up the flames, and the entire town was endangered. Junior firemen, taking their orders from the regular chief, planted themselves atop the business buildings. By hurling buckets of water on all the small fires that started, they were able to prevent conflagration.

For twelve consecutive hours they worked, forming bucket brigades and leaping from roof to roof. At last the fire was under control. The high point of this event was that junior firemen did not have to go to school.

Other jobs the junior fire fighters have done in their three years existence have been for the most part keeping hose lines clear at a fire and helping with traffic direction. Altogether they have assisted the senior men at eight important fires. They have responded to all calls and have performed their duties well.

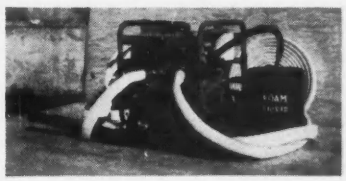
Since the beginning of the Red Cloud Junior Auxiliary Fire Department in 1942, other Nebraska communities have formed similar groups. Norfolk, DeWitt, and possibly still others are following Red Cloud's example of breaking in their firemen young.

In Oak Ridge, Tenn., the town where fire prevention is a life-and-death essential, this demonstration was conducted by the local Bureau of Fire Prevention for the school children. The interesting element in this photograph is the demonstration layout. Three demonstration set-ups of extinguishers and materials to be fired enabled everyone to have an equally close view. Over a public address system on the roof of the automobile every move of the firemen was described. In this way no student failed to see or hear any part of this fire prevention program.

NEW HALE FZZ PUMPING UNIT

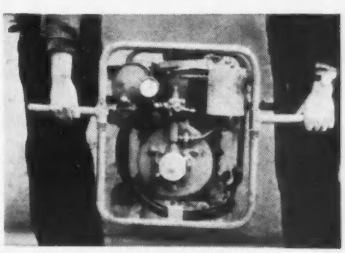
With a Direct-Connected 4-Cycle Air-Cooled Engine

- **READY FOR USE**
- **RUGGED**
- **POWERFUL**
- **PORTABLE**



Available with Built-in Foam Proportioner.

Pumping Fog and Solid Stream Through 1½" Lines



Can Be Easily Carried or Wheeled on Floor.

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Here's a pumper every Fire Company should own—the new Hale Model FZZ. It's ideal for use with booster streams, fog or liquid foam (Foam proportioner is built in when specified). Can be mounted on apparatus, making it possible to fight fires from moving equipment. CAPACITY: 60 Gallons per minute at 90 lbs. pressure; 150 G.P.M. at 30 lbs. pressure.

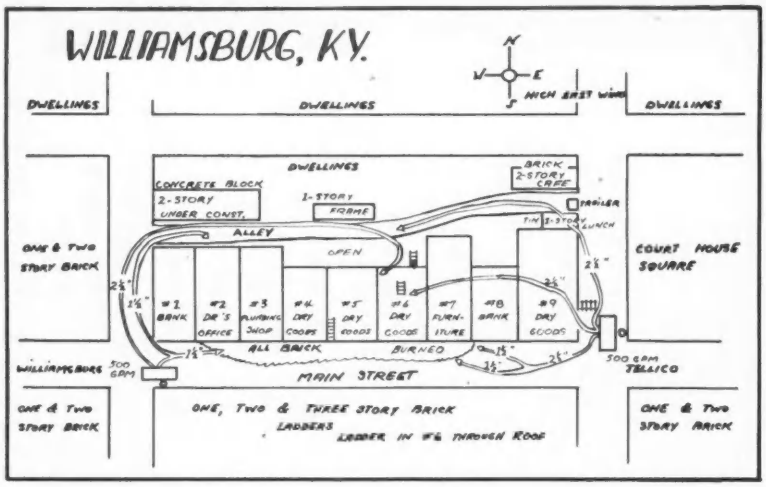
Ready for prompt delivery.

Write for FZZ Folder

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in all Standard Capacities



Jellico Tenn., Vamps Good Fire Fighters . . .

Reported by Chief W. C. Deuel

THE Jellico, Tenn., Fire Department (volunteer and N.F.P.A. member) received an alarm from the Williamsburg, Ky., Fire Department (volunteer) for help at 5 A.M. on December 26, 1945. After a short delay to remove skid chains and notify auxiliary firemen, we arrived in Williamsburg, 13 miles north of Jellico, at 5:20 A.M.

Upon our arrival, we found five two-story brick buildings involved, three almost gutted, and fire was spreading to the adjoining building on each end. Fire fighting was hampered by a strong east wind. We immediately laid two 2½-inch lines into the face of the wind, as it was our only chance to stop the fire. The first line was laid up Main Street to buildings Nos. 5 and 6 (see diagram), the second up the alley for use on the same buildings. Advancement of this line was not safe because of the danger of falling walls. The Williamsburg alley line had been used on the back end of all the buildings as the fire progressed.

Before being moved to the roof, an attempt to advance our Main Street line up the stairway between buildings Nos. 4 and 5 failed because of excessive smoke. The Williamsburg Department requested that we move our Main Street line to the roof of building No. 7, which we did after changing the position of ladders to insure a maximum chance of escape.

We advanced this line over buildings Nos. 8 and 9 to No. 7. Wind velocity continued high and it was necessary to move one of the 1½-inch lines on Main Street to play on building No. 6, in order to help the other three 2½-inch lines check the spread of the fire. This was not possible until the wind began to slacken.

A good fire wall, the fact that the wind was strong to the east, and the use of 1½-inch lines checked the spread of fire to the west when almost everything was concentrated on building No. 6. By 6:20 A.M., after the fire was under control, we wyed two 1½-inch lines into our roof line, used smaller tips on the 2½-inch lines, and proceded to finish up and overhaul.

The fire was discovered by a passing truck driver at 4 A.M. after a delayed alarm and response. Several of the Williamsburg firemen were sick, and the Corbin, Ky., Fire Department (full-time paid) was called but could not respond because an engine was down.

Williamsburg then called Jellico and we responded with one engine and eight men, most of whom had never seen a fire of that magnitude. The firemen worked so well that spectators had to be shown the name on the engine before they were convinced that the Jellico Fire Department was entirely volunteer.

The loss was estimated at $100,000 and might have been higher without outside help.

★ ★ ★

Has Your Department Tried This?

RESIDENTS of New Ulm, Minn., have received these and similar messages with their electric light and water bills. During Fire Prevention Week and preceding the spring Clean-Up Campaign, the alert New Ulm Fire Department, member of the N.F.P.A., has been sending out these warnings and statistics in a manner that no householder can overlook. Some of the information is from the Fire Prevention Week news published by the N.F.P.A.

Clean - Up — Fix - Up — Paint - Up — Prevent Fires

May 2nd to May 8th, 1943

Keep Your Home Cleaned Up to Help Defense and Prevent Fires

Clean STOVE PIPES and CHIMNEY several times a year Open drafts wide daily which will prevent accumulation of SOOT and CREOSOTE in chimney and pipes.

Remove RUBBISH, PAPERS and all accumulations of combustible materials from basement to attic.

Place ASHES in METAL containers, NOT in WOODEN OR PAPER boxes.

Remove RUBBISH, ASHES, WEEDS and all other unnecessary combustible materials around buildings and empty lots.

Burn RUBBISH only in a safely covered brick or metal incinerater and WATCH the FIRE.

H. C. Groebner, Chief of Fire Department.
Frank Niemann, Fire Marshal.

Prevent Fires In 1944---

FIGURES FROM THE FIRE DEPARTMENT RECORDS OF 1943

67 Fire Calls — Annual Fire Loss $8,205.00

59 Calls in New Ulm — 8 Calls from Surrounding Country

89% of all Fires Occurred in Homes — 60% Were Chimney Fires

HELP ELIMINATE CHIMNEY FIRES

25 chimney fires from January 1st to March 17th, 1943
3 out of 5 chimney fires in December caused damage to buildings involved

To protect your home from Fires, CLEAN your stoves, furnaces, chimneys, and stove pipes NOW. Remove promptly all Ashes, Waste Paper, Rubbish.

PRACTICE FIRE PREVENTION FOR 52 WEEKS IN 1944.

H. C. Groebner, Chief of Fire Department.

"Indian Fire Pumps in no time at all had the fire under control—"

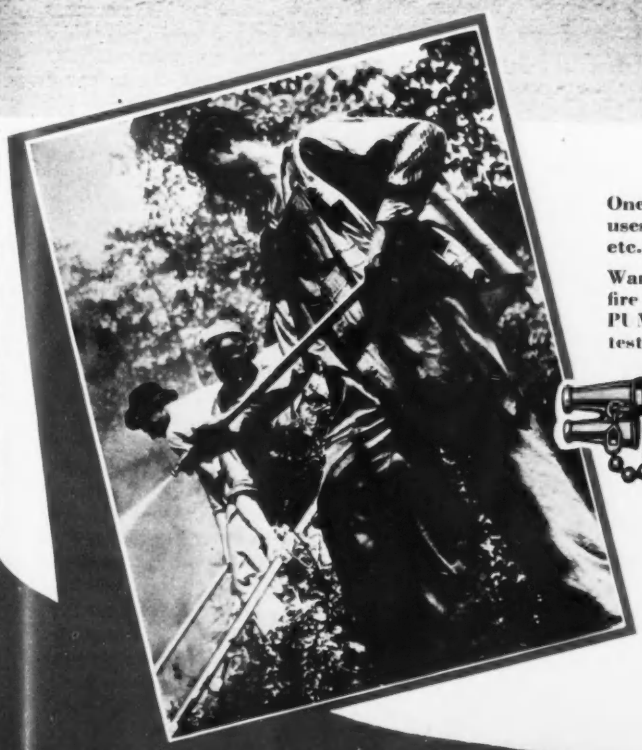
THAT'S WHAT FIRE CHIEF **R. H. CORBETT** OF NEW MATAMORAS, OHIO *says*

Chief R. H. Corbett

D. B. Smith & Co.
Utica, N. Y.

I never had a chance until yesterday to use the INDIAN FIRE PUMPS I bought from you some time ago. Yesterday we had a fire in the country that just about burned everything there was. We took the INDIAN FIRE PUMPS out to it and in no time at all, we had the fire under control and that is why I am sending you an order for more INDIAN FIRE PUMPS.

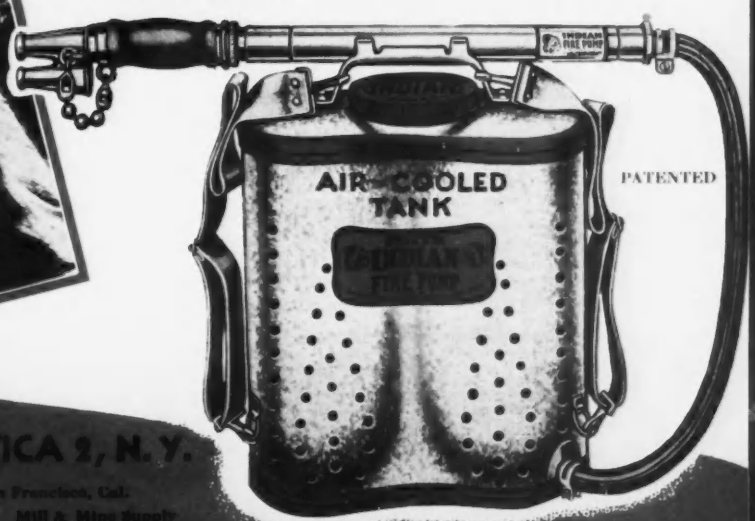
Yours truly,
R. H. Corbett,
Fire Chief and Marshal



Use INDIAN FIRE PUMPS for Inside and Outdoor Fires

One of the great advantages of the INDIAN FIRE PUMP is the many uses it has for fires in buildings and interiors, on roofs, chimneys, etc., and also outdoor fires in fields, leaves, rubbish and wooded areas.

Warm weather is just around the corner. Prepare now for summer fire hazards by equipping with an ample supply of INDIAN FIRE PUMPS! Send for catalog giving full information and copies of testimonials from users.



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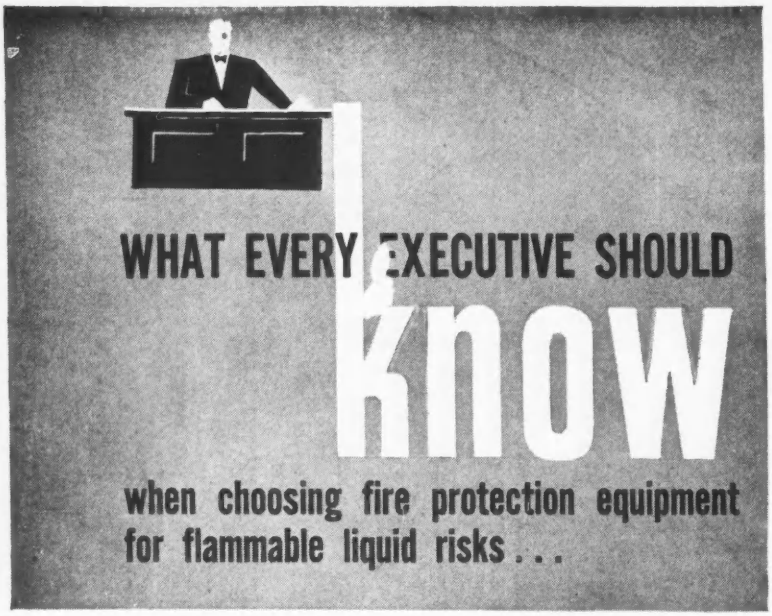
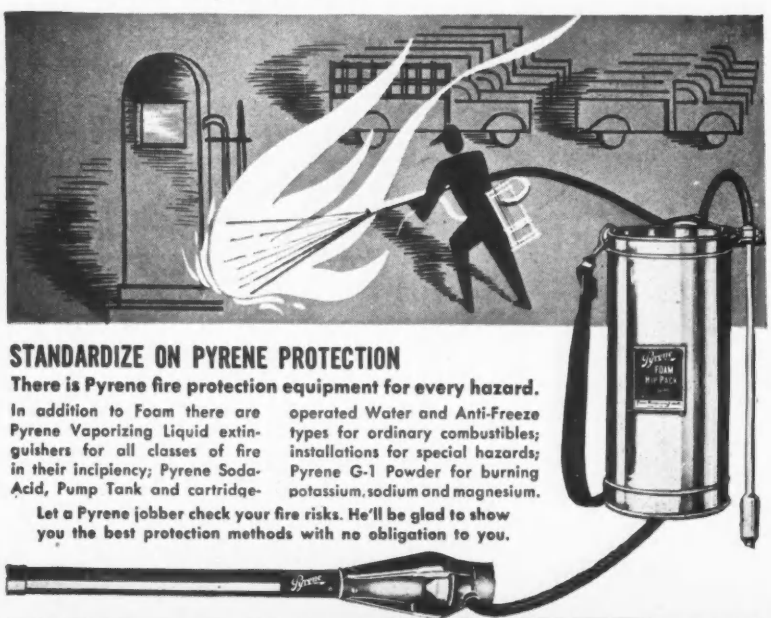


Water poured on burning flammable oils, lacquers or other flammable liquids may spread the flames . . . endangering surrounding materials. A flexible and fast acting agent on such fires is—

PYRENE FOAM—**available in portable, wheeled and stationary equipment—smothering foam that covers the surface of burning liquids as well as ordinary combustibles. The new air foam made at the nozzle of the Pyrene Foam Playpipe or in fixed installations from Pyrene Foam Compound and plain hydrant or salt water, forms a free-flowing, oxygen-excluding liquid blanket which quickly covers the burning liquid or solid and extinguishes the fire.**



STANDARDIZE ON PYRENE PROTECTION

There is Pyrene fire protection equipment for every hazard.

In addition to Foam there are Pyrene Vaporizing Liquid extinguishers for all classes of fire in their incipiency; Pyrene Soda-Acid, Pump Tank and cartridge-operated Water and Anti-Freeze types for ordinary combustibles; installations for special hazards; Pyrene G-1 Powder for burning potassium, sodium and magnesium.

Let a Pyrene jobber check your fire risks. He'll be glad to show you the best protection methods with no obligation to you.

Pyrene Manufacturing Company
NEWARK 8 NEW JERSEY
Affiliated with the C-O-Two Fire Equipment Co.

Plant Protection During Strikes

Continued from page 11

cases it may be necessary to bring men in after the plant is closed by the strike. In such a case it will be necessary for the plant safety director or fire chief to contact the negotiating committee of the union in order to clear necessary personnel through the picket lines. With the proper approach, this is not so difficult as you may think. Although no written agreement has been made between management and labor for this particular work — the fire chief or safety director of the plant must convince union officials of the importance of protecting production facilities to avert their damage or destruction by fire which may result from improper shut-down procedure.

After the plant is safely shut down, the aim is to maintain as close to normal fire protection as possible. The municipal fire chief should be notified by the plant fire chief of the strike at once and informed of conditions within the plant. The insurance company people should also be notified of the strike. They will usually be glad to discuss plans for maintaining plant protection and often will send a field engineer to the plant to review and advise on the precautions to be taken.

The second factor is the type of fire department employed by the plant. Is it a regular full-time organization? Or, is it a private volunteer brigade made up of employees from various department of the plant?

Is the plant fire department a member of the bargaining unit and are they involved in the strike?

If this is true, the plant fire chief finds that he must rely entirely on the municipal fire department. About the only thing he can do is to lend his knowledge of the layout of the plant.

If the plant fire department is of the volunteer brigade type, made up of employees from the various departments, it is obvious that during strike action no fire fighting force is available other than that which could probably be organized from plant guards or other untrained personnel present.

A third factor is the strikebound plant equipped with sprinklers and related fire equipment. Are these systems equipped with automatic alarm devices? If so, to what point is the alarm transmitted and what arrangements have been made for the alarm to be transmitted to municipal fire alarm headquarters? With few people in the plant, prompt discovery of a fire is less certain and greater reliance is therefore placed on automatic fire protection equipment.

A daily inspection covering everything from sprinkler valves to fire pumps will assure that everything is in working order. Where steam is needed, boilers

should be kept fired to provide heat to keep sprinklers from freezing and to supply power for fire pumps. A qualified fire pump operator should be in the plant at all times. A competent plant fire chief will see to it that a pump operator is in the plant — strike or no strike. If sprinkler systems are not equipped with automatic alarm devices it is very important that hourly recorded watchman service be maintained twenty-four hours a day.

There are also other important factors. What arrangements have been made or could be made in regard to the transmission of fire alarms from a strikebound plant? Most large industrial plants are equipped with their own fire alarm system. Usually these systems terminate at a central fire alarm office located on the premises. It would be wise for such systems to be tied into the municipal fire alarm system. You can readily see the advantage of such a tie-in during a strike. All fire alarms originating in the strikebound plant would be transmitted directly to the municipal fire alarm office. This arrangement is at present being provided at plants in the city of Akron.

I feel, also, the importance of the municipal fire department being kept informed as to the general attitude of the striking employees. Are they peaceful? Or is there a tendency towards violence? Is there any group trying to break the picket lines?

It is important to know the general traffic conditions in the vicinity of the strikebound plant. Would it be advisable to re-route fire apparatus responding to alarms of fire at locations other than the plant itself? Responding fire apparatus always seems to add to the excitement.

Here's another important factor: Is the plant fire chief receptive to assistance from the municipal department? I mention this because I know of one instance where the plant chief is not.

I think, too, that it is very important that the municipal fire chief and the plant chief come to some agreement as to who is in charge of a fire at the plant when both have responded.

With the end of the war, this country broke out into a veritable rash of strikes. More strikes are threatened and we have not felt the full impact of them by any means.

Please get me right: I am not saying we should do something to avert strikes. The little we can do as firemen makes no difference. But our job ties in with this picture. When these strikes are called and the workers begin walking off their jobs, a big threat faces us.

We have the responsibility of protecting these vast plants worth millions and millions of dollars. It's our job to see that they are protected against fire. They must be ready to roll when the strikes are over.

WHEREVER YOU FIND LIFESAVING AT ITS BEST

You'll find

The E & J RESUSCITATOR INHALATOR and ASPIRATOR

The E & J Resuscitator enables you to treat EVERY case of Asphyxia safely and effectively. Severe burns, broken back, fractured ribs, internal injuries, pregnancy, etc., are no hindrance to successful and safe artificial respiration when you employ this modern automatic breathing machine. It is now being used in a large majority of the leading industrial plants, hospitals and by countless fire departments.

E & J MANUFACTURING CO.

GLENDALE, CALIFORNIA

Pioneers and Specialists in Mechanical Artificial Respiration

Drexel Bldg. Philadelphia | 17 E. 42nd St. New York | 2144 N. Springfield Ave. Chicago | 581 Boylston St. Boston

530 Fernando St Pittsburgh | 3032 W. 25th Ave. Denver | 3900 Grandy Ave. Detroit | 5005 Euclid Ave. Cleveland

$300,000 Poultry Farm Fire

Lack of Few More Cement Blocks to Parapet Building Wall Caused Loss of Hatchery

Reported by
Chief Elmer S. Strimel
Cheswold Volunteer Fire Company
Cheswold, Delaware

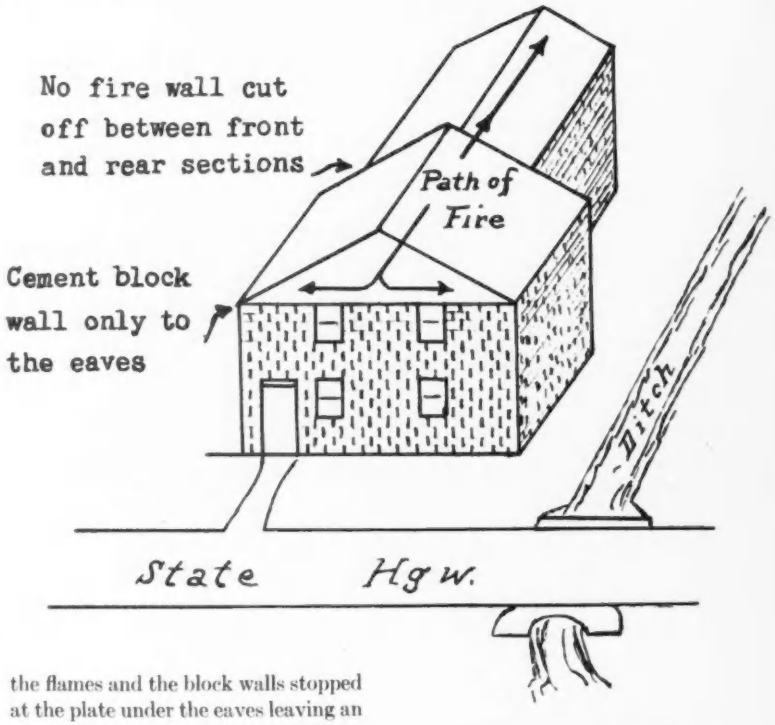
FAILURE to carry masonry building walls up to and through the roof resulted in a $300,000 fire loss in the hatchery of the Charles C. Marker Poultry Farm at Cheswold, Del., on the evening of December 8, 1945.

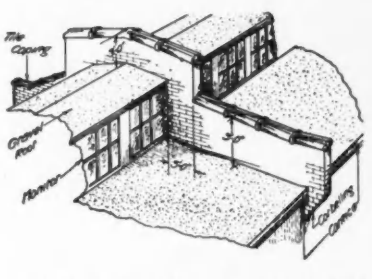
Fire apparently started in a first floor incubator room of the one and two-story cement and cinder block, "T" shaped building. It was believed to have started from a motor or overheated incubator.

Flames were discovered at 8:15 P.M. when electric lights in the house became dim and occupants went outside to investigate. An alarm was telephoned over the party line to the Cheswold Volunteer Fire Company, and help was summoned from the Hartley Fire Company and the Clayton Fire Company, the latter responding with water tank apparatus. A 2,500-gallon tank truck belonging to Smith Orchards, Inc., also gave valuable assistance.

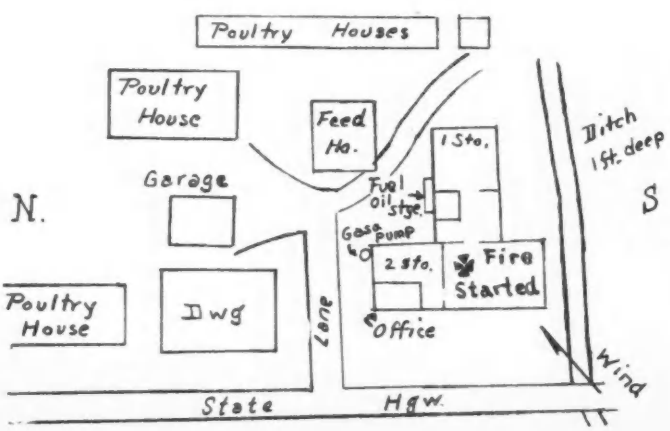
With the exception of about a foot of water in a ditch near the burning building, all water used for fire fighting was carried in water tank equipment. Hose streams used included two lines of 2½-inch hose, seven of 1½-inch hose, and five booster lines.

The fire spread through a celotex ceiling into the rear loft and into the second floor and loft in the front part of the structure. There were no fire walls or fire doors to stop the spread of the flames and the block walls stopped at the plate under the eaves leaving an open attic space through which the fire spread. Had the walls been run up at least to the ridge of the roof it is likely that the fire departments could have held the fire in check. As it was, the building covering 6,200 square feet was totally destroyed with a loss estimated at $100,000 to building and equipment, and $200,000 to contents. Fire fighters were able to salvage some crates of eggs. Records were also saved from an office in the building. Other large structures on the property were saved from the flames although in the path of the breeze.





A standard parapet fire wall extending above the roof retards the spread of flames under or over the roof.



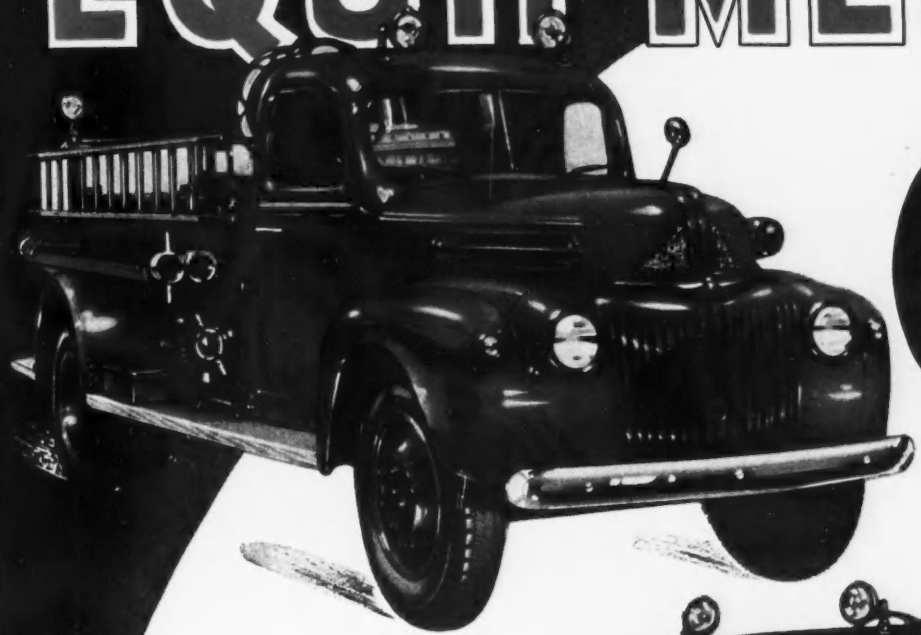
THIS fire is just another case of a very large loss to a rural property or industry due to failure to provide adequate fire protection. Obviously, values as great as those represented in this fire are worth protecting. At least a good fire cistern or water hole might

Continued on page 26

NEW CATALOG

FIRE EQUIPMENT

100 PAGES



WRITE FOR YOUR COPY TODAY!

No 136

ARMY E NAVY

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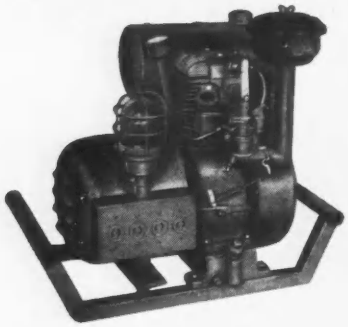
CHICAGO 12, U. S. A.



"U.S." ELECTRIC PLANTS

These rugged 1,500 watt units were designed to fire department specifications — built to meet every need. Dependable, quick-starting, 4-cycle engine. Positive lubrication. Automatic voltage regulation. No fussing to mix gasoline and oil. Compact — an easy load for two men.

Larger and smaller sizes are also available. Write for information.

UNITED STATES MOTORS CORP.
434 NEBRASKA ST. OSHKOSH, WIS.

StrangleAIR FOAM
FAST • SAFE • CLEAN

Subdues oil or gasoline fires in a matter of seconds. Prevents flashbacks. Blankets blaze and shuts off access to air. Clings to any surface, horizontal or vertical. StrangleAIR does not deteriorate. Good until used.

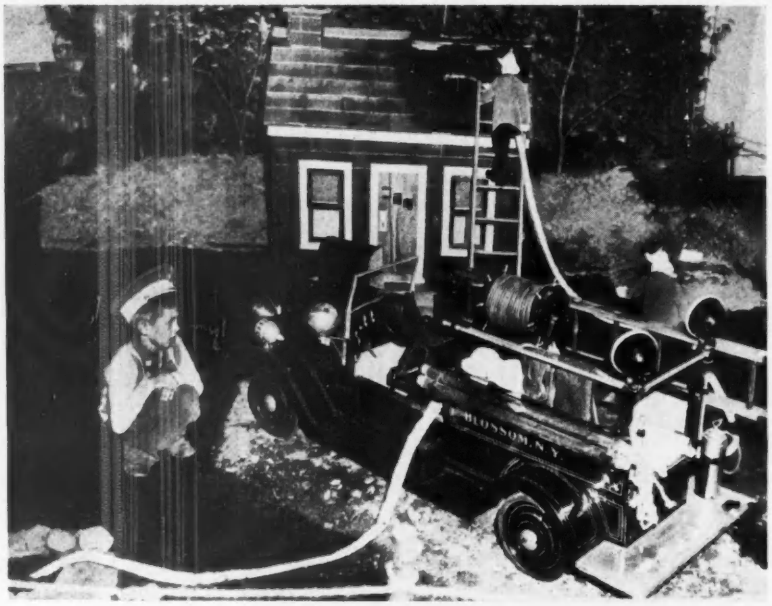
FIRE-SNUFFER NOZZLES

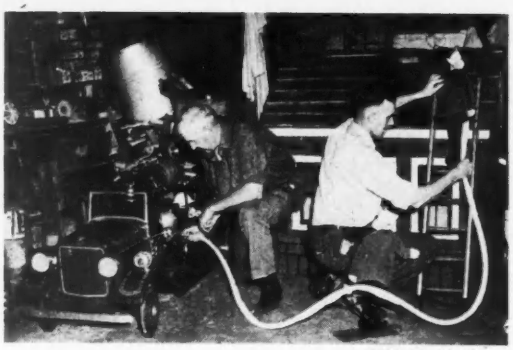
Simple, effective, easy to handle or clean. Deliver foam of uniform consistency.

Available through fire appliance supply houses.

Write for Illustrated Bulletin 25.

StrangleAIR FOAM
AMERICAN DIE & TOOL CO., INC.
EAST READING, PA.





Wide World Photos

Fire Fighting in Miniature

THE officials of the Blossom, N. Y., Fire Company last summer were seeking suggestions for their display in the Firemen's Building in Hamburg during the Erie County Fair. They took their problem up with Walter A. Knell, of Cheektowaga, and, as Mr. Knell's hobby is toymaking, the idea was born to build a model of Blossom's fire truck.

Blossom's display of fire fighting in miniature took first prize at the Erie County Fair. The truck is 57 x 30 x 32 inches, fully equipped with headlights, tail and spotlight. All lights light. It has its first aid kit, fire extinguishers, axe, pole, broom, coats and hats. There is hose of different sizes and a reel, a bell and siren, and of course a tool box. The greatest attraction is the pump which actually pumps water.

As the truck was built during wartime, much time was spent in procuring materials with which it could be constructed. The axe and pole are of wood. The extinguisher is the outside of an old thermos bottle. The fire coats are made of material purchased at a counter selling baby necessities. The hats are a combination of heavy paper and plaster of paris. The bell is a relic of horse and buggy, or perhaps it would be more accurate to say horse and cutter days, as it was a sleigh bell.

The truck has not been used for training, but it has been used for display purposes.

New British Fire Fighting Pamphlet

"A Note on Smoke," "Explosion Risks in Cork Grinding Mills," "Dust Explosions," and "Plastics, the Plastics Industry and the Fire Engineer" are the titles appearing in *Part III—Chemistry* of the Institute of Fire Engineers series of collected papers.

This strictly British booklet was organized to be of particular value to firemen preparing for the Institution of Fire Engineers examinations but should prove interesting to all pro-

gressive American fire fighters. For 25 cents this pamphlet may be obtained by writing to the Institution of Fire Engineers, 2, Millbank House, Great Peter Street, London, S.W. 1, England.

"The Business of A Fireman"

SIR EYRE MASSEY SHAW was Chief Officer of what was the forerunner of the London Fire Brigade, being appointed in 1867. He was a notable individual for many reasons. He was one of the early writers on fire department matters who never missed an opportunity to increase public interest in fire department affairs. A selection from his writings has been compiled in a book entitled, *The Business of A Fireman* by Frank Eyre.

This little book (only 78 pages) is not pretentious but is nicely bound in cloth and attractively printed. It is of limited value from the standpoint of either an historical document or as a technical text, but many firemen would find it a worthwhile possession because of its real feeling of the business of a fireman. Massey Shaw could express himself and did so effectively and well, showing himself to be not only a first-rate fireman (much of what he says applies just as well today) but a skillful writer. The publishers are Lomax, Erskine & Co., Ltd., Aldwych House, London, W. C. 2, England, and to them orders for the book should be sent directly. The price set on the book is four shillings net, or about .80, and it is suggested that in ordering, a remittance of a dollar be sent the publishers which will take care of any additional mailing cost.

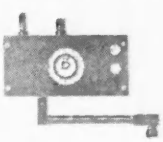
CAPT. JOHN B. GROVE DIES

THE Wheaton, Ill., Fire Department, N.F.P.A. member, suffered a great loss with the death, on Christmas Eve, of Capt. John B. Grove. The oldest member of the department, Captain Grove was in his fiftieth year of active service. He was a well known figure in northern Illinois fire department circles.

Captain Grove had participated in the municipal Christmas tree celebration and succumbed to a heart attack during the evening.

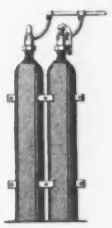
Modern Seaboard Diesel Engines . . . Protected by Modern C-O-Two

Modern fire protection on high speed diesel locomotives is not only imperative, it's good business. Past experience has shown that should a fire occur in a diesel locomotive, travelling at high speed — it can cause serious damage and high loss to equipment. Due to the high speed, wind conditions are greatly increased, thus the fire spreads quickly, destroying valuable equipment. Adequate protection — quick detection and fast extinguishment of diesel engine fires is a must.



Smoke Detecting Unit

C-O-TWO engineers solved this problem to the satisfaction of the Seaboard Railway. Fires over the engines are detected by a fire alarm system operated by thermostatic control. To quickly extinguish fires in these areas two tanks of fast acting, non-damaging, non-conducting carbon dioxide are provided along with two carbon dioxide hose reel systems. Fires in parts of the engine-trucks, over fuel tanks and battery boxes are detected by the ever-alert C-O-TWO Smoke Detector. For these hazards, C-O-TWO equipment provides pressure for foam and water type extinguishers supplied by our affiliate, Pyrene Manufacturing Company.



Modern fire protection for diesel engines — whether for transportation or stationary jobs is another C-O-TWO development. Write today for full information.

Sales and Service in the Principal Cities of United States and Canada

AFFILIATED WITH PYRENE MANUFACTURING COMPANY

CAIRNS

In Regulation or Drop Brim Style, 8-Comb or Solid Top.

HELMETS

All the best features 100 years of "know how" have produced, are built into these sturdy helmets—including the CAIRNS Self-Adjusting Cushion Lining that grips the head and absorbs shocks. Rugged top grain leather is the material used, processed for strength and heat resistance, and strongly reinforced to hold the shape. "Keep Your Head With a Cairns."

DEPARTMENT RECORDS

You need our Loose-Leaf Fire Record Book, in sizes for 375 to 1500 alarms. And let us supply your Secretary's Record Books, Secretary's Forms, Certificates, etc.

Write for Catalog 131

CAIRNS & BROTHER

Outfitters to Firemen Since 1836

444 LAFAYETTE STREET, NEW YORK 3

CIRCUL-AIR

FIRE HOSE DRYER

- Is easier to use
- Saves drying time
- Reduces hose stretch
- Prevents mildew and rot
- Improves building design
- Air-conditions as it dries

THE CIRCUL-AIR CORPORATION

6339 East Palmer Avenue

DETROIT 11, MICHIGAN

Fighting Fire in Chunking, China

Above. Here is the noble and esteemed fire engine, not guaranteed to seriously frighten any fire.

Chunking, China. China has had considerable experience with fire in the last decade, but the methods of fire prevention and fire fighting belong to the past. The equipment they possess is a combination of antique and modern — imported mainly from Great Britain and the United States. When a fire starts in China, the result is generally complete destruction, due to lack of water pumping facilities and the advanced preventitive measures used in the more progressive parts of the world. Loss by fire each year has been staggering.

Prior to the war, the International Settlement in Shanghai had an outstanding fire brigade. It was staffed by American, British, and Chinese officers under the late Chief Montague W. Pett. Chief Pett, an English N.F.P.A. member, is credited with having been the first to introduce the 1½-inch hose in China, as he found the firemen having trouble handling heavier lines. Shanghai was one of the first Asiastic cities to be attacked by Japanese bombers. (See VF, April 1938, for pictures of the attack.)

Below. The merits of high pressure have evidently not been heard in China's wartime capitol. This stream has little g.p.m. rating, but the fire demon is no doubt impressed by the shiny brass helmets and the standard bearer.

IMPORTANT! **NEWS** — **for every FIRE DEPARTMENT!**

M·S·A Announces . . .

THE REVOLUTIONARY

M·S·A

Chemox

SELF-GENERATING

OXYGEN BREATHING APPARATUS

Generates its own oxygen as you breathe—in the amounts you need—giving you *one hour's* protection in unbreathable air, using a replaceable chemical canister! Weighs only 13½ lbs. complete. No cylinders, high-pressure valves or fittings. Fog-free lenses. Absolutely simple to use. Proved by Navy battle service all through the war! Write now for Bulletin BM-8, and an actual demonstration.

ONE REPLACEABLE CANISTER DOES THE WHOLE JOB!

AND

THE M·S·A DEMAND-TYPE OXYGEN MASK

Built to high standards of construction and dependability, this extremely simple M.S.A. Oxygen Mask operates on the demand principle—supplying oxygen direct from refillable cylinder, for one-half to one-hour period. No special training required—facepiece has quick-disconnect fitting to conserve oxygen during standby periods—no lens fogging. Write for Bulletin BM-7. Demonstration gladly arranged.

JUST PUT IT ON—OPEN A VALVE—AND BREATHE!

MINE SAFETY APPLIANCES COMPANY

BRADDOCK, THOMAS AND MEADE STREETS PITTSBURGH 8, PA.

District Representatives in Principal Cities

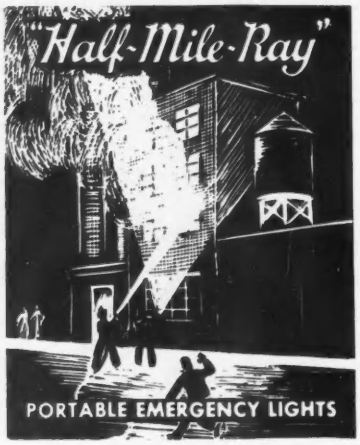
Fyr - Fyter equipment has proven its value in preventing small fires from becoming disastrous through the loss of life and property. Recent catastrophic fires with terrific loss of life emphasizes the urgent need of fire protection. A complete line of Underwriters Laboratories Labeled Fire Extinguishers.

HELP SAVE LIVES AND PROPERTY

Get Fyr-Fyters for safey's sake. We advise and serve manufacturing plants, public institutions, homes, garages, trucks, autos e,tc., immediately. Write us today regarding Fyr-Fyter equipment for your own protection.

THE FYR-FYTER CO.
DAYTON 1, DEPT. 20-14 OHIO

BUY BONDS **Fyr-Fyter**



SEND for CATALOG VF

Special light-weight dry cell Searchlight. Requires no attention. Always ready for use. Two filament bulb. Sure-grip soft rubber handle.

THE PORTABLE LIGHT CO., INC.
216 WILLIAM ST., NEW YORK 7, N. Y.

Midwestern Rubber and Canvas FIREMEN'S CLOTHING

This Midwestern Combination Suit, made of Vanitex, the modern waterproof fabric, is sold separately or together. The "Mackinaw Coat" is a highly serviceable garment with flexible elastic inner sleeves; adjustable collar strap, detachable wool lining, Midwestern safety snaps, two outside pockets, 6" storm flap and many other good features.

Regular Firemen's Boots available ¾ length. See your local Midwestern distributor for price and literature, or write the factory.

Hundreds in use All over America

Midwestern Bunker Pants with detachable wood lining, safety snap on adjustable belt, wide protecting flap, are sturdily constructed with reinforced crotch for pole sliding. Write today.

Manufactured by
MIDWESTERN MANUFACTURING CO.
MACKINAW, ILLINOIS

$300,000 Poultry Farm Fire

Continued from page 20

have been provided for adequate pumper suction, possibly utilizing water from the nearby ditch to fill a suction basin.

The fire also makes clear that the desirable fire protection practice of subdividing substantial values by fire walls and fire doors is as important in protecting rural property, as it is in buildings erected under town and city building regulations.

Christmas Eve Hospital Fire

Continued from page 7

buildings but do not touch old structures which have the greatest hazard? Will more lives have to be contributed to the effort before city building ordinances demand sprinkler protection for buildings housing the sick and the aged? It is the hope of all fire prevention officials that the report of this fire will result in a public demand for fire-safe buildings, construction and planning that will anticipate, as far as is humanly possible, the outbreak of fire.

Fireman, Play Safe and Survive

Continued from page 13

given by one, and only one member of the team.

The officers' responsibility is continuous and careful supervision in the fundamentals of accident-free lifting and conveying. It is rather difficult to lay down any concrete rules regarding manual lifting for only those qualified by physique and training, as it must be recognized that "he-men" may not be available during an emergency and the lifting will be left to who ever is available.

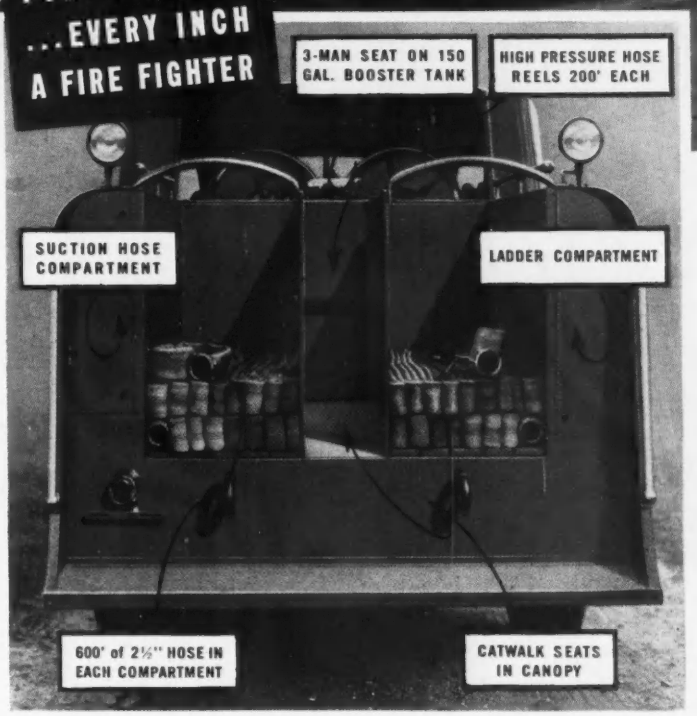
Industrial fire brigades have recognized the value of such training. Industry has put on an intensive program of education in safety because of the influx into war production of untrained workers — many of them women, older men and youths. By constant training and supervision, it is possible, within a comparatively short time, to hold such injuries to a minimum.

* * * *

The fireman has been called "The Guardian of Public Safety." He should also be the guardian of his own safety, so that by playing safe, he can save others.

150 hp ENGINE . . . WITH DUAL IGNITION, DUAL CARBURETORS, AND DUAL FAN BELTS
ROOM FOR SIX MEN
CANOPY TOP . . . AND OPEN IN BACK FOR QUICK EXIT TO REAR WHERE HOSE IS CARRIED
ALL CONNECTIONS AND CONTROLS ENCLOSED—TO PROTECT THEM AGAINST FREEZING, SNOW and ICE
NO RUNNING BOARD ELIMINATES MEN STANDING ON SIDES —A SAFETY FEATURE
SPED

FWD ENGINEERED . . . TO GIVE YOU MORE AND BETTER FIRE-FIGHTING FEATURES


FORE AND AFT ...EVERY INCH A FIRE FIGHTER
3-MAN SEAT ON 150 GAL. BOOSTER TANK
HIGH PRESSURE HOSE REELS 200' EACH
SUCTION HOSE COMPARTMENT
LADDER COMPARTMENT
600' of 2½" HOSE IN EACH COMPARTMENT
CATWALK SEATS IN CANOPY

An FWD Engineered fire truck is every inch a fire-fighter! It is equipped with dependable four-wheel-drive power that gets the apparatus to the scene quickly and safely. It is built to function with the greatest fire-fighting efficiency—every piece of equipment and every control instrument conveniently located and quickly accessible. Fire chiefs and commissioners are invited to discuss the needs of their departments and communities with FWD fire truck engineers—to gain the benefit of the broad experience these engineers have gained in more than 30 years of building fire fighting apparatus.

THE FOUR WHEEL DRIVE AUTO CO.

CLINTONVILLE, WISCONSIN

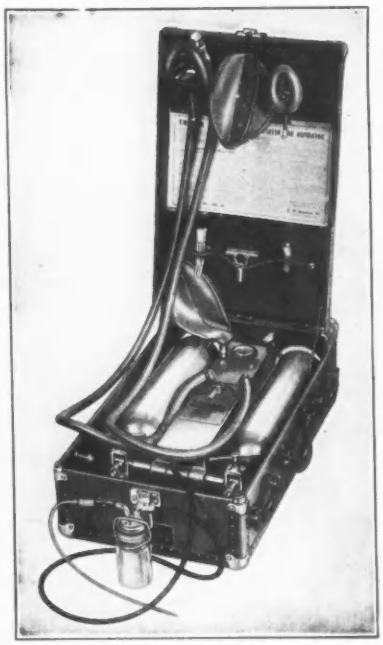
Canadian Factory: KITCHENER, ONTARIO

FWD

FOUR-WHEEL-DRIVE *Fire Apparatus*

GETS TO FIRES FASTER AND SAFER!

Insure the Breath of Life with the EMERSON RESUSCITATOR



When asphyxia strikes and the breath of life is threatened, the fire chief faces one of his most critical problems. It may be that he has only a matter of moments to make decisions and do things that will save a human life.

Then is when he stands in greatest need of the insurance against asphyxial death afforded by the EMERSON RESUSCITATOR, ASPIRATOR & INHALATOR.

J. H. EMERSON CO.
24 Cottage Park Ave., Cambridge, Mass.
Representatives in Principal Cities

Fire Company Membership

MEMBERSHIP PLAN

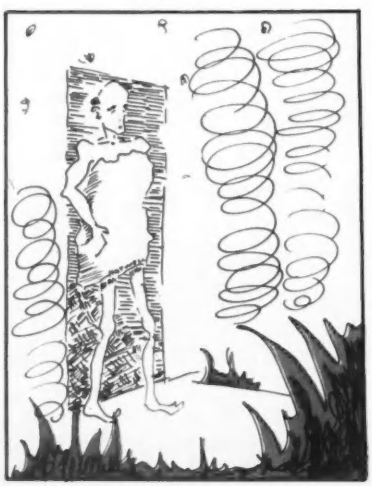
THE N.F.P.A. Volunteer Firemen's Section is open to all fire departments and fire companies in communities of less than 25,000 population, to all industrial fire brigades, and to bona fide volunteer fire organizations in communities of over 25,000 population. Members of the Volunteer Firemen's Section are entitled to ten copies of FIREMEN magazine as part of the company membership. In addition, each company receives one set of all the regular material mailed to N.F.P.A. members, such as the monthly News Letter, Quarterly magazine, technical standards, and popular bulletins and posters. All other associate members of the National Fire Protection Association receive one copy of FIREMEN magazine each month, if requested, as a part of their individual membership.

Membership in the Volunteer Firemen's Section costs a minimum of $10 a year and brings FIREMEN magazine to ten firemen. Additional firemen may be enrolled under the membership of a member fire company at the cost of $1 per additional man. Thus the total cost of a company membership enrolling fifteen firemen is $15.

NEW COMPANIES

THE thirteen new members of the N.F.P.A. VolunteerFiremen's Section bring the grand total of member departments and companies up to 1,247. The list of new fire departments is as follows:

"Did you call me while I was in the tub, dear?"



North Sacramento Fire Dept., North Sacramento, Calif.
Suffield Fire Dept., Suffield, Conn.
Container Corp tion of America, Chicago 11, Ill.
Mt. Rainier Vol. Fire Dept., Mt. Rainier, Md.
Freeport Fire Dept., Freeport, N. Y.
Fort Johnson Fire Dept., Fort Johnson, N. Y.
Roanoke Rapids Fire Dept., Roanoke Rapids, N. C.
Kane Fire Dept., Kane, Pa.
Hancock Fire Co., Norristown, Pa.
Mayville Fire Dept., Mayville, Wis.

Canada

Bralorne Mines, Ltd., Fire Dept., Bralorne, B. C.
Port Moody Fire Dept., Port Moody, B. C.
Beardmore & Co., Ltd., Acton, Ont.

$25 Contest for Firemen

A PRIZE contest open to industrial and municipal firemen, safety engineers, and home owners, is announced by F. Dale Bacon, General Manager of the Fire Extinguisher Division of The General Detroit Corp. The subject is "My Most Exciting Experience with a Portable Fire Extinguisher." Prizes of $25 each month for the next six months will be paid to the best entry submitted between the first and last day of each month.

The entries will be judged by the particular experience described, and not by the manner in which it is presented. It is important that entries apply to actual use of the portable fire extinguisher in an emergency, either by the contestant or someone known to the contestant.

In announcing the contest, Bacon described it as "part of this corporation's extensive fire safety program which, it is hoped, will help make America conscious of the menace of fire and of the importance of stopping fire before it spreads."

Entries for the first month's prize are now being accepted. All material received on or before March 31 will apply to this first period. Applicants east of the Rocky Mountains should address the Contest Department, The General Detroit Corp., 2272 E. Jefferson, Detroit 7, Mich. Persons west of the Rocky Mountains should send material to the Contest Department, The General Pacific Corp., 1800 S. Hooper St., Los Angeles 21, California.

OUT.. IN 14 MINUTES BY "SUB-SURFACE" METHOD

U. S. Navy test on 93' diameter blazing tank shows . . . "SUB-SURFACE" Method of foam applications kills gasoline fires—when properly engineered foam liquid is used.

MEARLFOAM-5 was successfully employed at this U. S. Navy test at Findlay, Ohio in July 1945. The multi-protein, blended foam-producing liquid is the same dependable mechanical (air) foam liquid supplied to the Navy for shipboard and shore base fire-fighting during wartime—and now supplied to the Navy for peacetime protection.

Ask for condensed data sheet describing the properties of this war-born fire-fighter that yields the live, lasting, fire-resistant (air) foam. *Technical assistance available.*

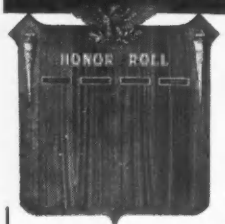
Completely safe and non-corrosive—may be used with standard Mechanical Foam-Forming Equipment

★ ★ MEARLFOAM-5, in pre-mixed solutions with hard or sea water, will not form any objectionable precipitate on long standing.

FOAM ON FIRE OUT... Stays OUT!

THE MEARL CORPORATION
153 Waverly Place, New York 14, N.Y.

HONOR YOUR SERVICE MEN



with a **Permanent Roll of Honor** — a lasting tribute to your boys now returning from service. Have it on the wall when they come home. Beautiful walnut plaque with Eagle and victory torches. Individual names in silver on gold-bordered permanent name plates. Sizes for any number of names. Write today for illustrated price list.

U. S. FLAGS

— now available in any size desired. All types of materials. Also flag sets, Standards, etc. Tear out this ad and write for free price list today.

REGALIA MFG. CO.

Dept. 102. Rock Island, Illinois

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MANUFACTURERS' ANNOUNCEMENTS

John Bean Company Acquires Nash Plant for Big Expansion

The John Bean Manufacturing Co. of Lansing, Mich., has recently purchased a huge plant at Lansing which was operated during the war by the Nash-Kelvinator Corporation. The factory contains 457,511 feet of floor space and covers nearly ten acres of ground. There are two main buildings in the plant, and about one-third of this factory will be used for production of F.M.C. High Pressure Fog Fire Fighters. It is reported that the payroll of the Bean Company will be more than doubled as a result of this expansion and that removal of the company's operations to the new factory will be carried out as soon as possible.

●

Diesel Electric Locomotives Protected by C-O-TWO

Fires on diesel electric locomotives, that might be whipped to dangerous size in the winds caused by "streamliner" speeds, are now promptly detected and extinguished by new equipment which was developed by the C-O-Two Fire Equipment Company and the Pyrene Manufacturing Company. The equipment automatically detects both smoldering and fast-burning fires underneath or inside the locomotive, and can kill fires inside the cab while traveling at high speeds or stop to extinguish flames under the train or along the right of way. Fires over the engines are detected by a thermostatic system which turns on a red light and sounds a gong. Electronic smoke-detecting apparatus reveals fires in the battery boxes or on the under side of the locomotive.

In the engine compartment, fire is extinguished by means of a built-in carbon dioxide system which floods the endangered area and quickly smothers fire. For fires inside or underneath the engine, carbon dioxide hose reel and hand extinguishers and foam playpipes are provided. By a simple control, the playpipes may be used to discharge either high expansion mechanical foam for oil and gasoline fires or plain water for wood and brush fires. Fires as far as 100 feet from the train along the right of way can be extinguished by means of the playpipes.

●

Kidde Moves Offices

Walter Kidde & Company, Inc., moved their sales and executive offices from 140 Cedar Street, New York City to their main plant at Belleville, New Jersey on December 17. To insure a high level of sales and efficiency of manufacturing the plant has become active in new product development. The company is branching beyond the fire extinguishing field into markets which employ either the type of manufacturing facilities Kidde now has, or the expanded sales organization the company is building.

●

New Extinguisher Instruction Card Published by American-LaFrance

A new series of concise instruction cards, explaining the operation and maintenance of four of the most widely used types of hand fire extinguishers, has been prepared by American-LaFrance-Foamite Corporation, of Elmira, N. Y. They

cover the Foam, Soda-Acid, Vaporizing Liquid, and Carbon Dioxide types. Clear illustrations accompany the text and show the various steps to be taken in handling, operation, and maintenance.

These cards, mounted adjacent to the extinguishers they illustrate, will provide a constant and accurate guide to plant employees. Upon request, a reasonable number of the cards will be available to industry in general, without obligation. A sample will be sent on request to American-LaFrance-Foamite Corp.

●

New Catalog Published by M.S.A.

The new, complete 178-page 6-B Catalog has just been published by Mine Safety Appliances Company, describing and illustrating the complete range of M.S.A. safety equipment for industrial application, including many new products. A 6-page introductory section illustrates and describes the complete research laboratories and plant facilities of Mine Safety Appliances Company. The 6-B Catalog is available in a new, handy, pocketsize edition as well as in the standard 8½ x 11 inch size. Copies may be secured by writing direct to Mine Safety Appliances Company, Pittsburgh 8, Pa.

Teh militar, operations thrusting south along the main railway line.

ment troops ar within 90 miles of Mukden, vital rail center in the battle for Manchuria.

library, auditorium, music room, gymnasium, door swimming pool. One complete wing will be devoted to hospital facilities.

previously acknowledged that the separat were operating in Khamseh, armed with weapons which were distributed by unknown people.

Wheeled Units Get to Danger Spots in a Hurry

Easy to push and to maneuver, yet packing a terrific fire-fighting wallop, Kidde Wheeled Units are especially suited for protecting hazards too severe to be handled by hand extinguishers.

All Kidde Wheeled Units are supplied with two large wheels that make for ease of pushing and speedy movement, and with additional small wheels that simplify maneuvering.

No pump or other equipment is needed for operation. The carbon dioxide is discharged under high pressure by its own stored energy through the shielded Kidde nozzle.

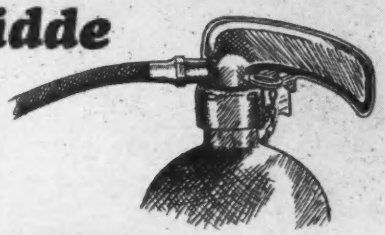
Units are built with carbon dioxide capacities of 50, 75 and 100 pounds. Full details are available on request, from Walter Kidde & Company, Inc.

WANT TO BRUSH UP ON FIRE PREVENTION METHODS?

"Fire — and How to Fight It" packs the story into 36 down-to-earth pages. Write for copy (free, of course).

Walter Kidde & Company, Inc., 256 Main Street, Belleville 9, N. J.

Kidde



FIRE-FIGHTING WALLOP... ONE-FINGER CONTROL!

15 pounds of flame-killing carbon dioxide . . . controlled by a single finger. A novice can operate — just aim at fire, pull trigger.

Mail and Phone Orders Filled

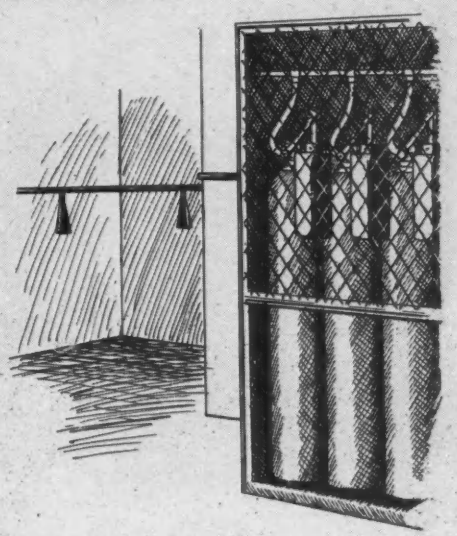
Kidde

SAVES RECHARGING DOLLARS

No annual recharging with *this* water extinguisher! Reaches full range *instantly*. Maintains constant start-to-finish discharge rate.

Mail and Phone Orders Filled

Kidde



Made-to-measure extinguishing systems

Engineered by Kidde to protect specific fire hazards in flammable liquids, electrical equipment. Automatic or manual operation. Can fill enclosed space with carbon dioxide or direct discharge at specific danger spot. Can be designed to protect several hazards from one bank of cylinders. Details on request — write us about your problem.

The word "Kidde" and the Kidde seal are trade-marks of Walter Kidde & Company, Inc.

Walter Kidde & Company, Inc. • 256 Main Street, Belleville 9, New Jersey

Citizens Union

General output at factories and mines decreased 4 per cent in October, while in the first half of Novemb

'Officer' Scans

stationed in a little town in France for several months, wooed a French girl by telling her

THIS ADVERTISEMENT IS ONE OF A SERIES APPEARING CURRENTLY IN INDUSTRIAL PUBLICATIONS

TRADE MARK

GAMEWELL

REG. U.S. PAT. OFF.

The Fire Alarm Factor . . . .

SEVEN MAJOR ITEMS OF FIRE DEFENSE

are recognised in the grading schedule, namely

1. Water Supply	1700 Points
2. Fire Department	1500
3. FIRE ALARM	550
4. Police	50
5. Building Laws	200
6. Hazards	300
7. Structural Conditions	700
	5000 Points

- FIRE ALARM . . . rated third in importance of the active fire defenses is seriously deficient in most municipalities and when fire occurs — some 700,000 times annually in the United States and Canada — alarms are frequently delayed, unnecessary fire losses occur and — if nothing is done about it — losses continue to waste the resources of the communities and insurance companies.

- YOU . . . as a citizen . . . have a right to study the fire defenses of your community and if you find them deficient to urge, in the interest of public safety, that adequate provision for their improvement be included in the Post-War plans.

If the data on "Fire Alarm" is not available locally, write us; we will supply the information and tell you how to check it.

Protect LIFE — HOME — BUSINESS and INCOME

Install A FIRE ALARM BOX AT EVERY FIRE HAZARD

Write for our latest booklet entitled "It Can Happen Here"

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